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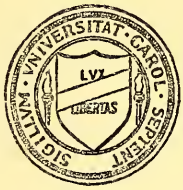

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A

TREATISE of MUSIC,

CONTAINING THE

PRINCIPLES

OF

COMPOSITION.

WHEREIN

The ſeveral Parts thereof are fully explained, and made uſeful both to the Profeſſors and Students of that Science.

By Mr. RAMEAU,

Principal Compoſer to his Moſt Chriſtian Majeſty, and to the Opera at Paris.

Tranſlated into Engliſh from the Original in the French Language.

SECOND EDITION.

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PRINCI-

PRINCIPLES OF COMPOSITION.

CHAP I.

Introduction to Practical Muſic.

Of the GAMUT.

AS there are but ſeven Diatonic Sounds, that is to ſay, ſeven Degrees, ſucceſſively in a natural Voice, ſo likewiſe in Muſic there are but ſeven Notes, *C*, *D*, *E*, *F*, *G*, *A*, *B*, which is called the Gamut; and, if we proceed further, it can be but by repeating the firſt Note, and ſo on, according to the above Order.

Theſe ſame Notes repeated, and which are but the Replicates of the one or the other, are called Octaves.

It is proper to add the Octave to the firſt Note at the End of the Gamut, for better diſtinguiſhing this Octave; thus, *C*, *D*, *E*, *F*, *G*, *A*, *B*, *C*.

If we begin and end this Gamut by any other Note (which is proper to be practiſed, though it be contrary to the Diatonic Order) it is plain by this Octave added, that the like may be done to the other Notes; ſo that, if we begin by *G*, we muſt then ſay, *G*, *A*, *B*, *C*, *D*, *E*, *F*, *G*, in aſcending; and *G*, *F*, *E*, *D*, *C*, *B*, *A*, *G*, in deſcending; ſo of the other Notes.

Of Intervals.

The Gamut may be repeated as well aſcending as deſcending, and by different Notes; but the Diſtance from one Note to the other muſt alſo be obſerved, and this only in aſcending.

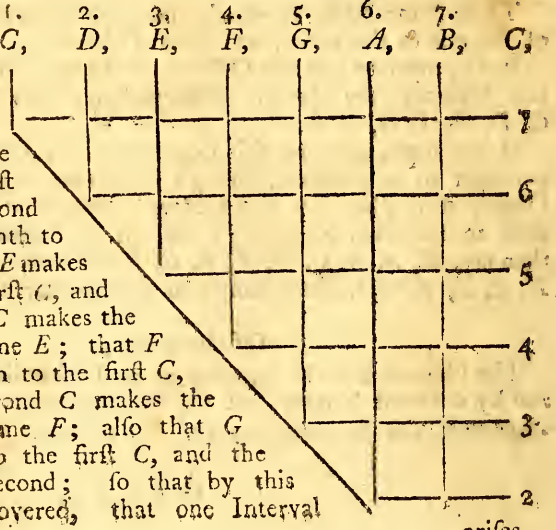
It is from this Diſtance, that all Intervals in Muſic are formed; and theſe Intervals take their Denomination from Arithmetical Numbers, and are called, 2. Second, 3. Third, 4. Fourth, 5. Fifth, 6. Sixth, 7. Seventh, and 8. Octave; we have placed the Figures over the Names of each Interval, becauſe we ſhall hereafter uſe theſe Numbers for denoting the Intervals we ſhall ſpeak of; ſo that it muſt be remembered, that 2 denotes the Second, 3 the Third, 4 the Fourth, &c. until the Octave 8; and when we ſhall ſay the Third, the Fourth, &c. thoſe Intervals are to be taken in the Gamut, by aſcending from the Note choſen for the firſt Degree, that Note being deemed the loweſt.

The Intervals in the Gamut deſcending are alſo to be obſerved, wherein it will be found, that the Fourth below *C* is *G*, as the Fourth above *G* is *C*, which is not difficult to comprehend, and may be very uſeful upon Occaſion.

Of Intervals *inverted.*

The two notes that create the Octave, are in the Main but one, and ſerve as Limits or Bounds to all the Intervals, ſince all the Notes in the Gamut are included in an Octave.

Thus by deeming the two *C*'s, by which the Gamut begins and ends, as one and the ſame Note, it may eaſily be apprehended that, whatever other Note be compared to each of thoſe two *C*'s, it will not produce two different Intervals; but by obſerving, that the firſt *C* is below the Note compared, and that the Second is above, there ſeems to be a Difference; this Difference in Appearance is proper to be explained.



Upon viewing the Gamut in this Shape, it appears, that *D* makes the Second to the firſt *C*, and that the ſecond *C* makes the Seventh to that ſame *D*; that *E* makes the Third to the firſt *C*, and that the ſecond *C* makes the Sixth to that ſame *E*; that *F* makes the Fourth to the firſt *C*, and that the ſecond *C* makes the Fifth to that ſame *F*; alſo that *G* makes the Fifth to the firſt *C*, and the Fourth to the Second; ſo that by this Means it is diſcovered, that one Interval

ariſes

ariſes from another; for if we take any other for the firſt Degree, by placing it at the beginning and at the End of the Gamut, and following the above Method, we ſhall always find the ſame Thing, that is to ſay, that the Second to the firſt Note will make the Seventh to the Octave of that firſt Note.

To make this better underſtood, it muſt always be ſuppoſed, that the Octave is inſeparable from the Note taken for the firſt Degree; ſo that having compared a Note with this firſt Degree, it muſt afterwards be compared with the Octave, from whence will ariſe two Intervals, the Firſt of which is called Fundamental or Principal, and the Second, Inverted, as it is in Effect; for if we compare *C* to *E*, and *E* to *C*, we find but a Compariſon inverted, in the ſame Manner as it is in Numbers, by ſuppoſing that 8 and 1 repreſent the ſame Note, and this Compariſon is firſt made from 1 to 3, and afterwards from 3 to 8.

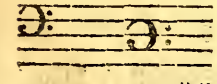
Of all Intervals, there are but Three that are Fundamental, and which ought conſequently to be remembered; they are the 3, the 5, and the 7, which may be placed in this Manner; each firſt Note anſwers to 1, and their 3, 5, and 7, anſwer to the Numbers which denote thoſe Intervals; and when once theſe three Intervals are known in Relation to one of the ſeven Notes, taken for the firſt Degree, we need only to add the Octave to that firſt Degree, in order to find that the Third becomes a Sixth, that the Fifth becomes a Fourth, and that the Seventh becomes a Second; theſe Three laſt Intervals, *viz* the Sixth, the Fourth, and the Second, being then inverted from the three firſt Fundamental Intervals.

1	3	5	7
C	*E*	*G*	*B*
D	*F*	*A*	*C*
E	*G*	*B*	*D*
F	*A*	*C*	*E*
G	*B*	*D*	*F*
A	*C*	*E*	*G*
B	*D*	*F*	*A*

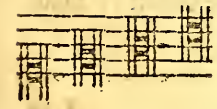
This Article ought to be carefully conſidered, for the better it be underſtood, the readier will the reſt be comprehended.

Of Cliffs.

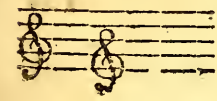
There are three Sorts of Cliffs in Muſic, the Baſs, or *F* Cliff; the Tenor, or *C* Cliff; and the Treble, or *G* Cliff.



The Baſs, or *F* Cliff, which is the Loweſt, is generally placed upon the Fourth, or the third Line.



The Tenor, or *C* Cliff, which is a Fifth above *F*, is placed upon all the Lines, excepting the Fifth.



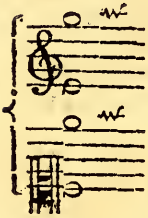
The Treble, or *G* Cliff, which is a Fifth above the Tenor, or *C* Cliff, is generally placed upon the Second, or upon the firſt Line.

Of

Of Parts.

As Harmony conſiſts in the agreeable Union of ſeveral different Sounds, and as theſe Sounds cannot be produced but from a Voice or an Inſtrument, each Voice or Inſtrument is called a Part, and each Part hath its particular Name, which is not always mentioned, but is known by the different Situation of the Cliffs.

EXAMPLES.

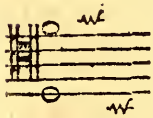


Firſt Treble.

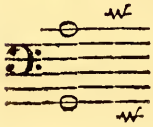
Second Treble.

Theſe two Parts are adapted to Female Voices.

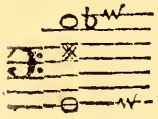
Counter Tenor, the higheſt of Male Voices.



Tenor, a mean Part, the neareſt to the Laſt.



Baſs or Concordant, a mean Part between the preceding and following Part.



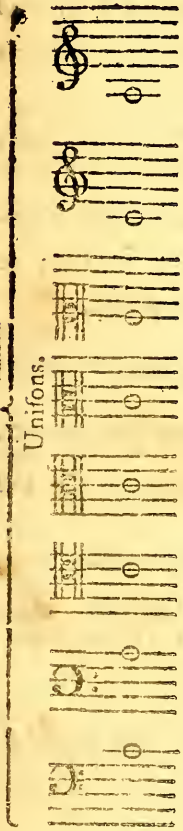
Connter Baſs, the moſt grave, or loweſt of Male Voices.

This

This Mark, or Guide ⌒, ſhews that one may exceed the Note until that Mark, at the Diſcretion of the Compoſer, who is to keep his Voices within a proper Compaſs, by Reaſon that they are always ſtrained or forced, when at the extreme Parts.

As to Inſtruments, they have their different Compaſs; the Violin, for Example, is limited to an Octave below its Cliff, but it is not ſo limited above. As the Violin and the Harpſichord, or Organ, are ſufficient to execute all Sorts of Muſic in General, we ſhall paſs over in Silence the other Inſtruments, the Knowledge of which may be acquired by thoſe who practiſe them.

Of Uniſon.



Uniſon is two Notes in the ſame Degree, or the ſame Note repeated; the Example ſhews where the Notes of each Part are to be placed ſo as to be at the Uniſon.

As Variety of Parts conſiſts in different Sounds, and not in the Quantity, we may ſay, that all theſe Parts are but one; from hence the Uniſon is forbidden in Compoſition, yet Beginners may uſe it until they have made a further Progreſs.

Of Meaſure, *or* Time.

Meaſure is divided by Bars, and each Bar contains either 2, 3, or 4 Parts, and is diſtinguiſhed by Common Time and Triple Time. Common Time is when there are 2, or 4 equal Notes, or Parts in a Bar; and Triple Time is when there are but three equal Notes, or Parts in a Bar.

The ſloweſt Movement in Common Time is known by this Mark C, by a when it is ſomewhat faſter, and the quickeſt of all by , or 2, or $\frac{2}{4}$.

Triple Time is diſtinguiſhed by this Mark $\frac{3}{2}$, which is the ſloweſt Movement, and contains three Minims in a Bar. By $\frac{3}{4}$, which is faſter, and contains three Crotchets in a Bar; and by $\frac{3}{8}$, which is the quickeſt of all, and contains three Quavers in a Bar.

There is another Kind of Triple Time marked thus $\frac{9}{4}$, or $\frac{9}{8}$, which is compoſed of the former, and contains 9 Crotches, or nine Quavers in a Bar.

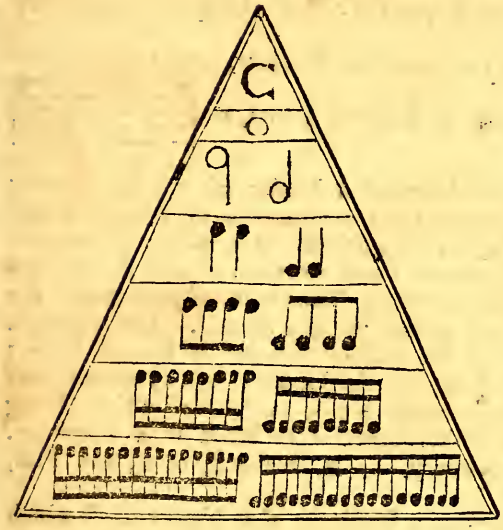
There is alſo another Kind of common Time, compoſed of Triple Time, marked thus $\frac{6}{4}$, and contains ſix Crotchets in a Bar; or thus $\frac{12}{8}$, which then conſiſts of twelve Quavers in a Bar.

Of Notes *and their Lengths, and of* Slurs, Points, Reſts, *or* Pauſes.

There are ſix Notes moſtly in Uſe, which are a Semibreve ; a Minim , a Crotchet, , a Quaver a Semiquaver , and a Demiſemiquaver ; their Proportions to each other are theſe, a Semibreve as long as two Minims, four Crotchets, eight Quavers, ſixteen Semiquavers, or thirty-two Demiſemiquavers.

EXAMPLE.

EXAMPLE.



1 Semibreve.

2 Minims.

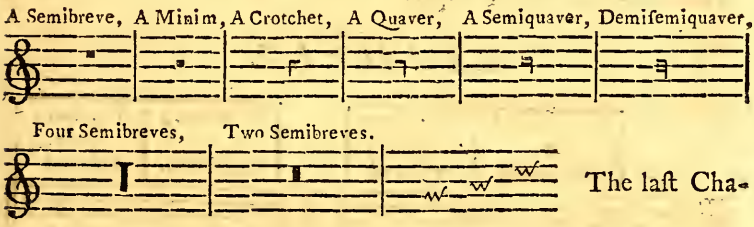
4 Crotchets.

8 Quavers.

16 Semiquavers.

32 Demiſemiquavers.

The Characters for denoting Silence, called Reſts, *or* Pauſes, *are theſe.*



The laſt Character is uſed as a Guide or Directory to the next Note.

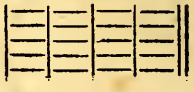
A Point or a Dot, added to any Note, makes it half as long again.

EXAMPLE.

B A Slur

A Slur is marked thus ⁀.

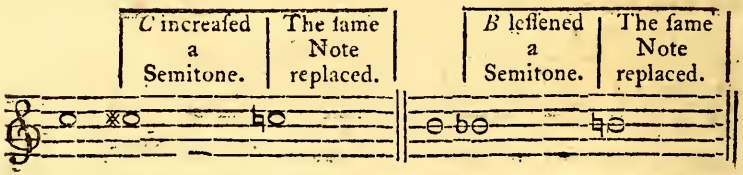
A Repeat is made thus :s:, and is uſed to ſignify, that ſuch a Part of a Tune muſt be played over again from the Note over which it is placed.

A ſingle Bar ſerves to divide the Meaſure, and a double Bar is ſet to divide the Strains of Songs or Tunes, as 

The leaſt Interval we have taken Notice of at the Beginning of this Chapter, was under the Denomination of a Second, and this Second may be alſo diſtinguiſhed by a whole Tone or a Semitone. The Semitone is found between *E* and *F*, and between *B* and *C*; whereas a whole Tone is found between all the other Notes of the Gamut, that make a Second. And although this Semitone, by which the ſmalleſt Interval is formed, be not found between all the Notes of the Gamut, it may nevertheleſs be uſed by Means of certain Signs, or Marks, which, being added to any Note, either increaſe or leſſen it a Semitone. Theſe Signs are called Sharp, or 𝄪, Natural, or ♮, and Flat, or ♭.

A 𝄪, or Sharp, increaſes a Semitone that Note againſt which it is placed, whereas a ♭, or Flat, leſſon it a Semitone; and a ♮, or Natural, which ſometimes bears the Property of a 𝄪, is uſed to contradict thoſe Flats and Sharps, in order to replace the Notes in their natural Order.

EXAMPLE.

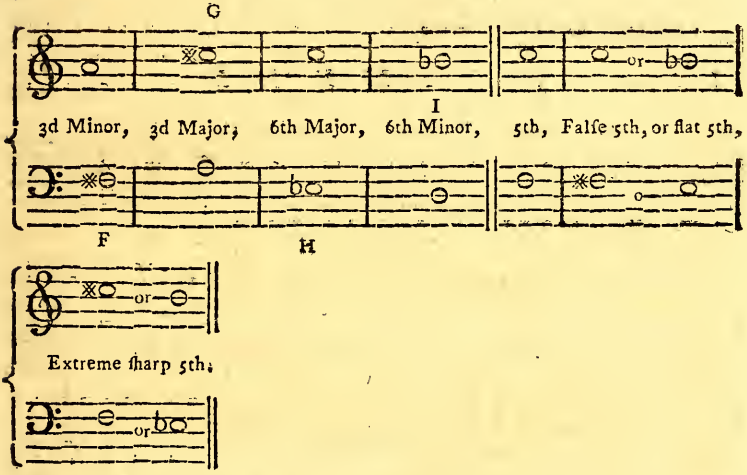


Thoſe Intervals whoſe Difference conſiſts but of a whole Tone, or a Semitone (provided that the Name of the Interval be not thereby altered) are diſtinguiſhed by Major and Minor, or Sharp and Flat; for Example, the Third from *C* to *E* is called Major, or Sharp, becauſe it exceeds that from *D* to *F*, which is conſequently Minor, or Flat; ſo likewiſe the Sixth from *E* to *C* is Minor, or Flat, becauſe it contains a Semitone leſs than that from *F* to *D*; ſo of the other Intervals that bear the ſame Name, the Difference conſiſting only of a Semitone, more or leſs, and which may be alſo diſtinguiſhed by extreme Sharp, or extreme Flat, as will be more fully explained hereafter.

It

It is generally by Means of a 𝄪, or ♭, that the Difference from the Major to the Minor, or a ſharp or flat Interval, is known; a Sharp 𝄪 added to the lowermoſt Note *(F)* generally makes a Minor Interval, and added to the uppermoſt Note *(G)* makes it Major; on the contrary, a ♭, or Flat, added to the lowermoſt Note *(H)* makes a Major Interval, and placed againſt the upper Note *(I)* makes it Minor.

E X A M P L E.



It is by comparing the upper Note with the correſponding Note in the Baſs, that the Major and Minor Intervals in the Example will be found.

When a 𝄪, a ♮, or a ♭, is placed over or under a Note in the Baſs, it does not alter that Note, but denotes only Major or Minor Intervals.

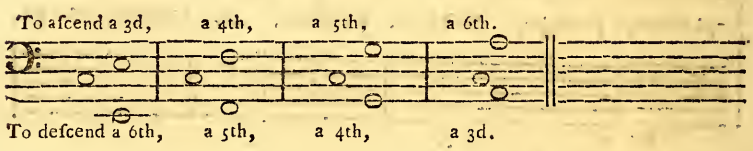
CHAP II.

Of the Fundamental Baſs.

THE grand Art or Myſtery in Compoſition, either for Harmony or Melody, principally conſiſts, and eſpecially at preſent, in the Baſs, which we call Fundamental, and as ſuch muſt proceed by Conſonant Intervals, which are the Third, the

Fourth, the Fifth, and the Sixth; ſo that we cannot make any of the Notes of the Fundamental Baſs to aſcend or deſcend, but only by one of thoſe Intervals, the leaſt of which is to be preferred to the greateſt, that is to ſay, that, if we had a Mind to make that Baſs aſcend or deſcend a Sixth, it would be better to make it deſcend or aſcend a Third; for it is to be obſerved, that to aſcend a Third, or deſcend a Sixth, is the ſame Thing; ſo likewiſe to aſcend a Sixth, or deſcend a Third; to aſcend a Fifth, or deſcend a Fourth; to aſcend a Fourth, or deſcend a Fifth, as the following Example ſheweth.

E X A M P L E.



The Name of the Note being ſufficient for determining a propoſed Interval, and knowing that the Third to *C* is *E*, it matters not in the Progreſſion of that Baſs, whether *E* be placed above or below *C*; ſo of the others; and this ought to be well remembered; for when we ſhall hereafter ſay, to aſcend a Third, a Fourth, a Fifth, or a Sixth, it is to be underſtood to deſcend a Sixth, a Fifth, a Fourth, or a Third; or if we ſay, to deſcend a Third, it is to be underſtood to aſcend a Sixth, *&c.* obſerving that this only regards the Progreſſion of the Baſs.

We have not included the Octave among the Conſonants, becauſe that the Octave being the Replicate of 1, it is as well for the Baſs to remain upon 1, as to aſcend or deſcend upon the Octave; yet we are ſometimes obliged to make the Baſs deſcend an Octave, for a greater Liberty to the other Parts, which are to be placed always above the Baſs.

CHAP III.

Of the perfect Chord, *by which begins Compoſition in four Parts.*

A CHORD is the Diſpoſition of ſeveral Sounds heard together, which Sounds are marked by a Note in each of the Parts propoſed.

The

The only Chord we have at preſent need for, is the perfect, which is compoſed of one Note placed in the Baſs, and of its Third, Fifth, and Octave, placed in the other Parts.

The Gamut will ſerve to find theſe Intervals, and this Baſs may be repreſented by the Number 1, as thus:

C, *E*, *G*, *C*, *C*.
1, 3, 5, 1, or 8.
1, 2, 3, 4, 5, 6, 7, 8.——We have marked 1, or 8, becauſe the Octave is always repreſented by the ſame Note that was taken for the Baſs.

The Third, the Fifth, or the Octave, may be placed indifferently in any of the Parts, being at Liberty to place the Third above the Fifth, or the Octave, and the Fifth above the Octave, provided that thoſe Intervals are found to be always above the Baſs; and each Part is to be kept within its natural Bounds, and ſo contrived, that the Tenor may be above the Baſs, the Counter-Tenor above the Tenor, and the Treble above the Counter-Tenor.

CHAP. IV.

Of the Succeſſion or Sequence of Chords.

IF the Baſs is to proceed by conſonant Intervals, the other Parts on the Contrary are to proceed by diatonic Intervals; ſo that in theſe laſt Parts we cannot ſkip from one Note to another, but to that which is the neareſt; as thus: *C* can go but to *D*, or to *E*, if it does not keep on the ſame Degree, as it often happens; ſo of the others; and here follows the Manner of doing it.

1. We chuſe a Note which is called the Key-note, by which the Baſs is to begin and end: This Note fixes the Progreſſion of all thoſe contained within the Compaſs of its Octave: If then we take *C* for the Key, we can uſe as well in the Baſs as in the other Parts, but the Notes *C*, *D*, *E*, *F*, *G*, *A*, and *B* without it, it being permitted to alter them by any Sharp or Flat.

This Note *C* being placed in the Baſs, you diſpoſe the Chord in the other Parts, obſerving that which makes the Octave to *C*, that which makes the Fifth, and that which makes the Third.

2. If after *C* the Baſs aſcends a Third *A*, or a Fourth *B* (ſee the Example) the Tenor—that made the Octave to *C*, which is the

the Baſs, ought afterwards to make the Fifth to the Note which in that Baſs aſcends a Third or a Fourth after *C*.

The Counter-Tenor, which made the Third to *C*, ought afterwards to make the Octave to the Note which aſcends a Third or a Fourth; and the upper Part, or Treble, which made the Fifth to *C*, ought afterwards to make the Third to the Note ſo aſcending a Third or a Fourth.

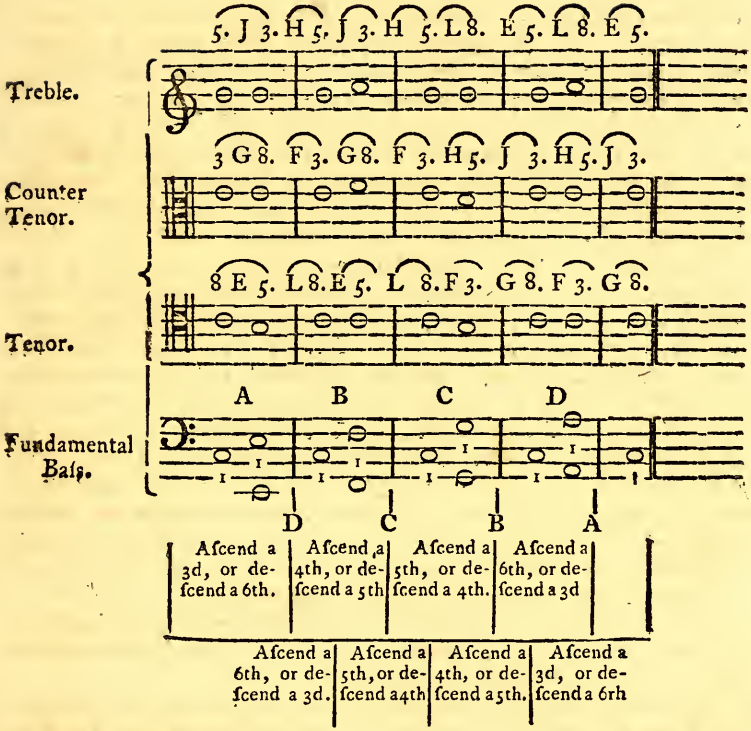
3. If after *C* the Baſs aſcends a Fifth *C*, or a Sixth *D* (ſee the Example) the Tenor—which made the Octave, ought, afterwards, to make the Third; the Counter-Tenor—that made the Third, ought afterwards to make the Fifth, and the upper Part or Treble that made the Fifth, ought to make the Octave.

4. and Laſtly, Thoſe that will not burthen their Memory by retaining the Progreſſion of each upper Part, in reſpect to the Baſs, need only to remember, that each of thoſe Parts can make but one of the three Intervals that compoſe the perfect Chord, and only in three different Manners, either by keeping on the ſame Note, or on the ſame Degree, or by aſcending or deſcending diatonically whatever Road the Baſs may take; ſo that if a Note of one of the Parts can make the Third, the Fifth, or the Octave, without altering its Poſition, it muſt abſolutely remain; but if by this Manner you cannot find any one of thoſe Intervals, you will infallibly find it by making it aſcend or deſcend diatonically.

If two Parts ſhould, by Chance, happen to meet upon the ſame Note or Degree, whereby one of the Intervals in the perfect Chord ſhould be wanting, it would proceed from one of thoſe two Parts having made one of the three Intervals of that perfect Chord, either by aſcending or deſcending: So that, having made it to aſcend, it muſt afterwards deſcend, or having made it to deſcend, it muſt afterwards aſcend; which is natural to that Part that makes the Fifth to a Note in the Baſs followed by another aſcending a Fourth, to which Note, ſo aſcended, this Part can make the Octave by deſcending, or the Third by aſcending, to which Degree this Part ought then to aſcend; this is alſo natural to that Part that makes the Octave to a Note of the Baſs followed by another aſcending a Fifth, and, in that Caſe, that Part muſt deſcend upon the Third, to the Note which aſcends a Fifth in the Baſs.

EXAMPLE.

E X A M P L E.



The Progreſſion of the upper Parts in this Example may be eaſily remembered, ſince you will find in all but 8, 5, and 8, 3, *E*, *F*; 3, 8, and 3, 5, *G*, *H*; 5, 3, and 5, 8, *J*, *L*; when the Baſs aſcends a Third *A*, or a Fourth *B*, it is found that 8 leads to 5 *E*; 5 to 3 *J*; and 3 to 8 *G*: And when the Baſs aſcends a Fifth *C*, or a Sixth *D*, it is found that 8 leads to 3 *F*; 3 to 5 *H*; and 5 to 8 *L*: So that, whatever Road the Baſs takes, we may know by the firſt Interval (be it a Third, Fifth, or Eighth) that which muſt be the next to the following Note in the Baſs; and ſo on until the End, by following the ſame Method, for each Part ſeparately, and obſerving that the 3, 5, and 8 be always contained in the three upper Parts, being at Liberty to give to any one of the Parts the 3, 5, or 8, to the firſt Note of the Baſs; but in a Succeſſion or Sequence of Chords, one cannot help following the Method above preſcribed, to each Part that ſhall have made the 3, 5, or 8th,

It

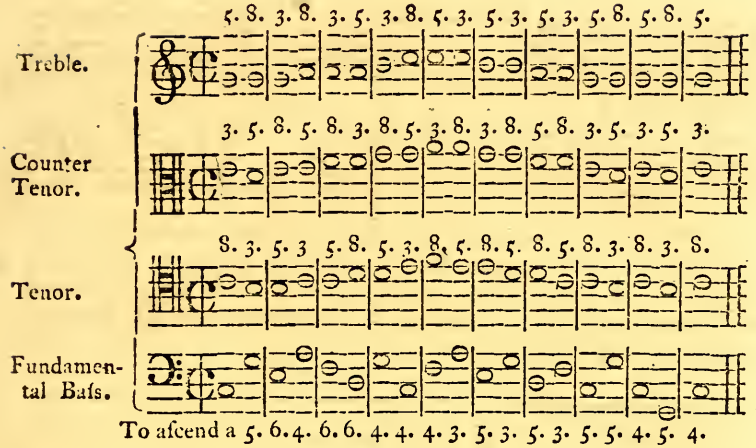
It appears alſo by this Example, that this Order preſcribed doth not only happen between the firſt and ſecond Note of each Bar, but likewiſe between the ſecond Notes of a Bar and the firſt of the next; ſo that, wherever the Progreſſion of the Baſs is the ſame, that of the other Parts will be ſo likewiſe. Therefore, the Interval marked *A*, between the two Notes of the firſt Bar, and between the two laſt Notes of the Example, being the ſame, the Progreſſion of the upper Parts muſt likewiſe be the ſame; ſo of the other Intervals of the Baſs marked by a *B*, a *C*, or a *D*. as well above as under the Baſs: Nevertheleſs, one muſt not ſtrictly ſeek the like Uniformity in one upper Part only, by Reaſon that the Succeſſion of Chords will oblige it to make ſometimes the Third, ſometimes the Fifth, *&c.* but it will always be found, that that Part which hath made the Third, the Fifth, or the Octave, will always follow the Progreſſion which is aſſigned to it by that of the Baſs. From hence it is to be concluded that, after having fixed and determined the Chords of the Parts according to the Progreſſion of the two firſt Notes of the Baſs, we muſt alſo fix and determine the Succeſſion by that of the ſecond Note of the Baſs to the Third, from this to the Fourth, and from this to the Fifth, and ſo on to the End, each Note of the Baſs always making one of the conſonant Intervals preſcribed to its Progreſſion with that that follows or precedes it; and each Interval of that Baſs fixes or determines the Progreſſion of the upper Parts.

We have placed the Number 1, either above or below each Note of the Baſs, to ſhew that in each Chord there will be found but the Numbers 1, 3, 5, 8.

You may at preſent compoſe a Baſs after what Manner you will, nevertheleſs, by making it begin and end by the Note *C*, being at Liberty to make it proceed by all the conſonant Intervals, without altering the ſeven Notes, *C*, *D*, *E*, *F*, *G*, *A*, *B*, by any Sharp or Flat, and obſerving to avoid the Note *B*, in the Baſs only, and after having diſpoſed the firſt Chord in each Part, the Progreſſion of thoſe Parts that make the 3, 5, or 8th—will be fixed by that of the Baſs.

EXAMPLE.

E X A M P L E.



Remember that to aſcend a Sixth, or deſcend a Third, is the ſame Thing; likewiſe to aſcend a 4th, or deſcend a 5th.

It is proper at firſt to begin by Common Time, and you may uſe either a Minim or a Crotchet for each Part of the Meaſure or Bar, in the ſame Manner as we have uſed a Semibreve.

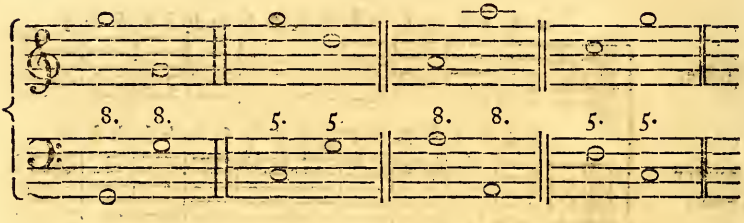
It is eaſily perceived, that the Diſpoſition of this Baſs depends only upon Fancy or Taſte; yet one may keep to it in the Beginning, to ſee if the Parts that will be placed above it be agreeable to ours; after which you may compoſe other Baſſes at Pleaſure, obſerving that the laſt Note of the Baſs ought always to be preceded by another of the Diſtance of a Fourth below, or a Fifth above it: that is to ſay, that the Note *C* ought to be preceded by the Note *G*, at the Concluſion, or final End of the Piece.

CHAP. V.

Of ſome Rules which muſt be obſerved.

1. TWO Octaves, or two Fifths, are never to follow one another immediately; yet it may be practiſed in Pieces of four Parts, provided that the Progreſſion of the two Parts that make two Octaves, or two Fifths, moves by a contrary Motion, that is to ſay, that if one of the Octaves aſcends, the other ought to deſcend.

Example of two Octaves, and two Fifths, moving by a contrary Motion.



2. You muſt avoid aſcending from a Minor, or flat Third, to the Octave, which cannot be found in the foregoing Examples, by Reaſon that the Major or Minor, or ſharp or flat Third, was not as yet in Queſtion; but the Diſcord we are going to treat of, will eaſily make us obſerve this Rule.

CHAP VI.

Of the Chord *of the Seventh.*

ARTICLE I.

SUppoſing that you are arrived at a ſufficient Knowledge of the conſonant Intervals, of which the perfect Chord and the Progreſſion of the Baſs are compoſed; the Relation, which theſe Intervals bear together, is now to be examined; and without taking any Notice of the Octave, which may be looked upon but as the Replicate of the Baſs, repreſented by the Number 1, it will be found, that the perfect Chord is compoſed of three different Sounds, the Diſtance of which, from the firſt to the Second, is equal to that from the Second to the Third, as appears by theſe three Numbers, 1, 3, 5, a Third from 1 to 3, and another from 3 to 5. Now, to find the Chord of the Seventh, one need only to add another Sound in the ſame Proportion thus, 1, 3, 5, 7, which makes another Third from 5 to 7; and this laſt Chord differs from the perfect, only by the 7th, which is added to it.

This Interval added to the perfect Chord, being Diſſonant or a Diſcord; the Chord wherein it takes place is called Diſſonant, and the Octave may be added to it, as in the perfect Chord, either for compoſing in five Parts, or for giving a better diatonic Progreſſion to the upper Parts; in which Caſe it is to be obſerved, that the Octave oftentimes takes the Place of the Fifth, which is indifferent, there being, in that Caſe, only to let the Parts follow their natural Courſe, which is to proceed diatonically

tally, whether the Octave, or the Fifth, happens to be in this Chord of the Seventh, or not; as to the Third, it cannot properly be left out.

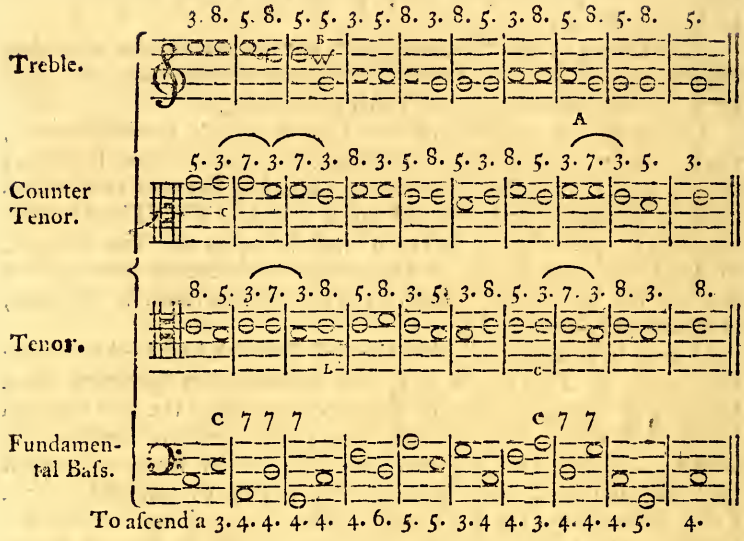
This Chord of the Seventh muſt not at preſent be uſed, but only upon ſuch Notes of the Baſs as are preceded and followed by a Fourth aſcending, or a Fifth deſcending.

The diſſonant Interval of this Chord, which is the Seventh, ought to be prepared and reſolved by a conſonant Interval; that is to ſay, that the Note which made the Seventh to the Baſs muſt be prepared and reſolved by a Third. The Third which prepares or precedes the Seventh muſt be upon the ſame Degree, or upon the ſame Space or Line with the Seventh that follows it; and the ſubſequent Third, by which the Seventh is reſolved, is to deſcend diatonically.

It muſt be ſo contrived, that the firſt Seventh be heard upon the firſt Note, or Part of the Bar, and conſequently prepared upon the ſecond Note, or Part of the preceding Bar; the firſt Seventh being that which is not immediately preceded by another Seventh. As ſoon as a Seventh hath been taken upon a Note of the Baſs that hath been preceded by a Fourth aſcending, or a Fifth deſcending, the Baſs muſt always proceed by the like Intervals, until the Key-note, which at preſent is that of *C*, by giving the Chord of the Seventh to each Note, excepting the Key-note and its Fourth, which are *C* and *F*. *C*, or the Key-note, is excepted, becauſe the Key-note cannot be deemed as ſuch, but with the perfect Chord; and *F*, or the Fourth, is excepted, becauſe, it being forbidden to uſe the Note *B* in the Baſs, if the Fourth, or *F*, carried the Chord of the Seventh, it would in that Caſe be obliged to aſcend a Fourth, or deſcend a Fifth upon *B*. *E* is likewiſe to be excepted, ſince one could not give it the Chord of the Seventh, without its being preceded by *B*, by reaſon of the Progreſſion limited to the baſs of this Chord; ſo that this Chord of the Seventh is not for the preſent to be uſed, but upon the Notes *A*, *D*, and *G*.

EXAM-

E X A M P L E.



In the upper Parts, the Seventh is found always between two Thirds, thus: $\overset{\frown}{3, 7, 3}$; and the firſt Seventh is always prepared in the ſecond Part of the Bar *C*.

The Neceſſity we are under to make the Seventh deſcend upon the Third, by which it is reſolved, alters the Progreſſion of that Part, which, as we have ſaid before, ought to aſcend from the Fifth to the Third, when the Baſs aſcends a Fourth; but as that ſame Part may alſo fall upon the Octave, we muſt abſolutely give it that Progreſſion, when the Seventh happens to take Place; becauſe, that the Seventh is obliged to fall upon the Third: therefore, ſince we cannot alter the Progreſſion of the Seventh, that of the Fifth *A* muſt be altered according to what we have already ſaid, that we were ſometimes obliged to uſe the Octave inſtead of the Fifth, in the Chord of the Seventh, by Reaſon of the diatonic Progreſſion of the upper Parts; and in Chap. IV. that when two Parts happen to meet upon the ſame Degree, that Part that can make one of the three Intervals muſt be altered, either by aſcending or deſcending.

The ſame Part that made the Fifth, can alſo make another Fifth *B*, provided that its Progreſſion, and that of the Baſs, be contrary, as was ſaid in the foregoing Chapter, which is done in order to complete the Chords, or to put the parts in their natural Place; ſee the Guide at *B*, which ſhews the Octave, which we have avoided in this Place, becauſe it is found in another Part *L*.

ARTICLE

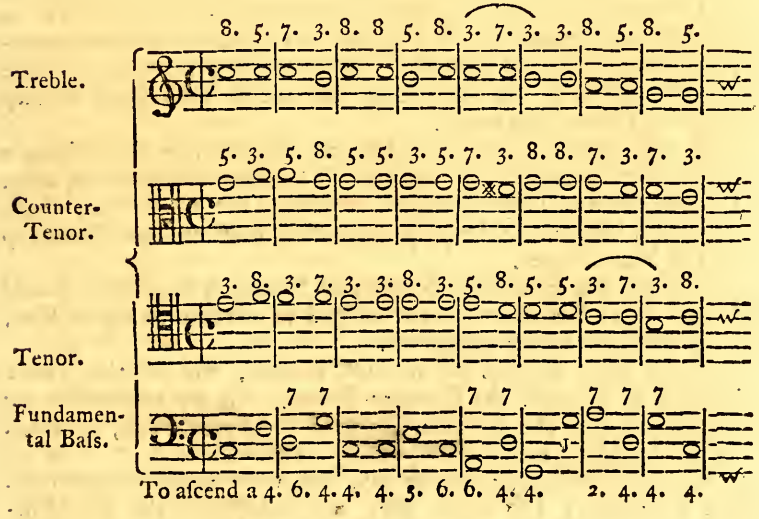
ARTICLE II.

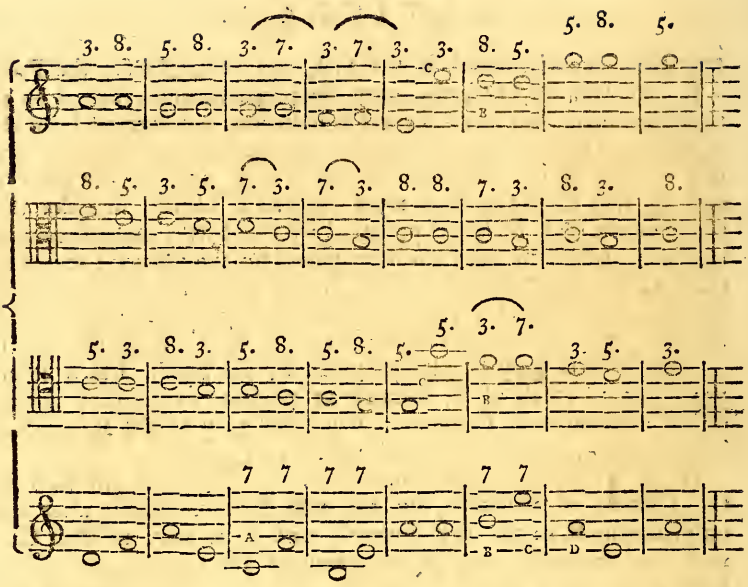
THE Seventh, which is the firſt, and we might ſay the Principal of all Diſcords, may be prepared and reſolved by all the Concords; but as its ſeveral Reſolutions are derived from the preceding Manner, we ſhall not as yet ſpeak of it, but only ſay, that it may alſo be prepared by the Fifth, and by the Octave, and in that Caſe the Baſs muſt deſcend a Third; in order that the Seventh may be heard prepared by the Fifth, and aſcend diatonically, when the Seventh is prepared by the Octave; obſerving that all the upper Parts deſcend, when that Baſs aſcends diatonically, excepting that Part which makes the Seventh, and which remains upon the ſame Degree, in order to fall upon the Third.

The Seventh may be alſo prepared by the Sixth, but it is not yet Time to ſpeak of it, becauſe at preſent we are only talking of the Fundamental Harmony, compoſed only of the Baſs, of its Third, Fifth, and Seventh, as thus, 1, 3, 5, 7.

N. B. That the Progreſſion we have preſcribed to the Baſs for the Chords of Sevenths, in the firſt Article, cannot alter but only in reſpect to the firſt Seventh, and it is only in that Caſe that that Seventh may be prepared by the Octave, or by the Fifth; for after the firſt Seventh, you will always find the Seventh between two Thirds, and by whatever Manner it be prepared, it will always be reſolved by the Third.

EXAMPLE.





This Example ſhews how the Seventh may be taken upon the four Notes, *E*, *A*, *D*, and *G*; by the liberty of making the Baſs to fall a Third, in order to prepare the Seventh by the Fifth, or to make it aſcend a Second for preparing the Seventh by the Octave. We find, in this Example, two Parts that aſcend together, an Octave *(C,)* which may be done in order to put the Parts in their natural Place, provided that thoſe Parts do not make together two Octaves, or two Fifths following; for what we have ſaid in reſpect to the Baſs, muſt likewiſe be underſtood of any two Parts taken ſeparately.

If two Parts can aſcend an Octave, the like rule holds for one ſingle Part, as appears by the Baſs *(F)* inſtead of remaining upon the ſame Degree; yet an upper Part could not do the like, where a Diſcord happens to be prepared, and it muſt in that Caſe keep on the ſame Degree.

It is not yet neceſſary to take any Notice of the Sharp placed before *F*, as Beginners are not obliged to uſe any Sharp or Flat, until they are better inſtructed.

If the Baſs exceeds its natural Bounds, and if the Tenor happens to be above the Counter-Tenor, it is by reaſon that we would not alter the diatonic Order of the upper Parts, to which we muſt ſubject ourſelves, eſpecially in this Caſe.

We have nothing more to ſay, but what depends upon theſe firſt Principles; the better they are underſtood, the leſs Difficulty there will be in comprehending the reſt.

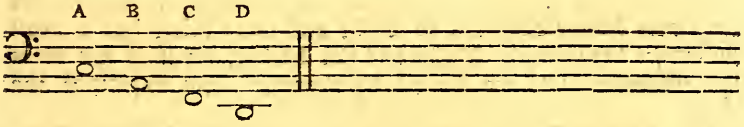
CHAP.

CHAP. VII.

Remarks touching the Diſcord.

A DISCORD, inſtead of being troubleſome to a Compoſer, on the contrary, it gives him a greater Liberty, for in all Progreſſions of a Baſs aſcending a Second, a Fourth, or a Sixth, there will always be found one Note in the upper Parts, which having made a Conſonant Interval with the firſt Note of the Baſs, may, without altering it, make the Seventh to the ſecond Note of that Baſs, which ought to be practiſed as often as poſſible, and by that Means the Fault of aſcending from the flat Third to the Octave, or from the flat Sixth to the Octave, will be avoided; but at the ſame Time it muſt be conſidered, whether the Note in the Baſs upon which you would take the Seventh, be followed by another, that can reſolve it by the Third, otherwiſe the common, or perfect Chord muſt be taken.

EXAMPLE.



I cannot take the Seventh upon the Note at *(B,)* though it be prepared by the Fifth to the Note at *(A,)* becauſe that it cannot be reſolved by the Third to the Note at *(C;)* but by putting the Note at *(D)* in the Place of the Note at *(C)* I then can take the Seventh to the Note at *(B)* ſince it will be naturally reſolved by the Third to the Note at *(D,)* ſo of the reſt, taking Notice that the Key-note cannot as ſuch carry the Chord of the Seventh, and that we ſpeak here only of the fundamental harmony.

CHAP. VIII.

Of the Key, and of its Denomination of Flat *and* Sharp.

WE have called the Key-note, that by which the Baſs is to begin and end; and we have mentioned that that ſame Key-note fixed the Progreſſion of the other Notes contained in its Octave; conſequently, if we take *C* for the Key-note,

note, we cannot alter the Notes *C*, *D*, *E*, *F*, *G*, *A*, and *B*, by any Sharp or Flat; for it is thus that the Gamut repreſents it in the Octave of *C*; from whence we conclude, that the Word Key is adapted to one Note, choſen as Principal to compoſe a Piece of Muſic in, and for that Reaſon is called the principal Key-note; this Note having the Privilege to determine all the diatonick Intervals, wherein all the Tones or whole Notes and Semitones, or half Notes, which ought to follow each other from the Key-note to its Octave, take Place, and which is called Modulating; and the Difference of the Mode or Key is this: The Mode (from whence Modulation is derived) conſiſts in the Third to the Key note; and as the Third can be but either Major or Minor, or Sharp or Flat; ſo likewiſe the Mode is diſtinguiſhed but by thoſe two Sorts, and for that Reaſon the Word Mode is generally comprehended or underſtood in that of Key, ſaying only a ſharp key, or flat Key.

If we give the ſharp Third to *C*, we ſay that we are in the Key of *C* Sharp, or *C* Major; and if we give it a flat Third, we ſay, that we are in the Key of *C* Flat, or *C* Minor; Modulation conſiſting only in theſe two Species of Major and Minor, which depends upon the Third given to the Key-note.

The Note *C*, within the Compaſs of its Octave, contains all the Tones Major that can be uſed; and there being but a ſmall Difference between the Major and the Minor, we ſhall not ſhew the Difference until we have fully examined and explained the Major.

The Key of *C* will ſerve as an Example for all ſharp Keys, for *D*, *E*, *F*, *G*, &c. may be taken as Key-notes, as well as *C*; but when once a Note hath been choſen for the Key-note, one cannot ſpeak of the others, but comparatively to that ſame Key-note; therefore the ſecond Note, the Third, the Fourth, the Fifth, &c. will be ſuch, but comparatively to the Note ſuppoſed for the Key-note; and conſequently, in the Key of *C*, the ſecond Note is *D*, the Third *E*, the Fourth *F*, &c. and here follow the Names of the ſeveral Notes or Tones in the Key of *C*.

C - - - - - - - - - Octave,
B - - - - Sharp Seventh, or leading Note,
A - - - - - - - The Sixth,
G - - The Fifth, or governing Note of the Key,
F - - - - - - - - The Fourth,
E - - - - - - - - The Third,
D - - - - - - - - The Second,
C - - - - - - - - The Key-note.

Obſerve two Notes, which, beſides the Key-note, have a proper Name to diſtinguiſh them from the others; the one is the governing

governing Note of the Key, or the Fifth, and is thus called; becauſe, in all final Cadences, this Note always precedes the Key-note, as may be ſeen in the foregoing Examples, where *G*, which is the governing Note of *C*, always precedes it, and eſpecially at the End or Cloſe. The other is the leading Note, or ſharp Seventh, and is thus called, becauſe, in whatever Part this Note is heard, the Key-note immediately follows it; therefore it may very properly be called the leading Note of the Key; and in the Key of *C*, the ſharp Third is *E*, the governing Note is *G*, and the leading Note is *B*, and the governing and leading Notes, and the ſharp Third, do in all Keys make the ſame Intervals as *E*, *G*, and *B*, make in the Key of *C*, excepting in flat Keys, in which the Third is flat.

CHAP. IX.

Of the Manner of modulating Harmonically, when a diatonic Progreſſion is given to the Baſs.

ALL Notes that carry the perfect or common Chords may be deemed Key notes, and all thoſe that carry the Chord of the Seventh, may be deemed governing Notes, with this Difference, that the governing Note of the Key is diſtinguiſhed from that which is but ſingly a governing Note, by reaſon that the Third to the governing Note of the Key muſt always be ſharp; whereas the Third to thoſe Notes which are but ſingly governing Notes, is oftentimes flat; and there being no other Key-note in the Key of *C*, but *C* itſelf, the perfect Chord muſt be given but to that ſame Note *C*; there being no other governing Note of the Key, in that ſame Key of *C*, but *G*, conſequently one cannot give the Chord of the Seventh with the ſharp Third, but to that ſame Note *G*.

Theſe two Chords, the Perfect and that of the Seventh, are as it were the only Chords in Harmony, for all other Chords proceed from them; and theſe are only affected to a Progreſſion of the Baſs, ſuch as we have hitherto treated of; and if we are going to alter that Progreſſion, we ſhall not thereby alter their Chords, but only the Diſpoſition, by placing the octave, either above or below one of the Sounds, or Notes, comprized in the Chord; which obliges us to give them another Name, in order to diſtinguiſh thoſe from which they are derived.

Conſonant Chords *derived from the Perfect.*

It muſt be obſerved, that the Number 1 repreſents the Baſs, and that the other Numbers ſhew the Diſtance from one Sound, or Note, to that of the Baſs; and that the Numbers 8, 10, 12, *&c.* are but the Replicates, or Octaves, of 1, 3, 5, *&c.* and as 8 is the Replicate of 1, ſo 10, and 12 are the Replicates of 3 and of 5: Alſo, that all Numbers may be reduced to a meaner or lower Term, the Intervals whereof will be equal: For Example, 4, 5, 6, may be reduced to 1, 2, 3; becauſe the Diſtance from 4 to 5 is not greater than from 1 to 2. Therefore, the Numbers 6, 8, 10, 12, may be reduced to 1, 3, 5, 7, by reaſon that there is not a greater Diſtance from 6 to 8, than from 1 to 3; ſo of the others, it being neceſſary to reduce to a Unity the firſt Number of each Chord; becauſe that Unity repreſents the Baſs to the perfect Chord, and that of the Seventh, from whence all Concords and Diſcords are derived.

We ſhall not take Notice of the 8 in the Chords, becauſe that Number is the Replicate of the Baſs 1.

	C, E, G.
Figures which are placed over or under the Baſs, to ſhew all the Sounds the Chord is compoſed of.	The perfect Chord is compoſed of 1, 3, 5, This Chord is always taken upon the Key-note, and ſometimes upon its Governing-note, or Fifth.

Chords *inverted, derived from the perfect* Chord.

6. The Chord of 6 is compoſed of 1, 3, 6, inverted from *E, G, C,* / *C, E, G.* / 6, 8, 10. / 1, 3, 5.

This Chord is always uſed upon the Third of the Key.

$\frac{6}{4}$. The Chord of $\frac{6}{4}$ is compoſed of 1, 4, 6, inverted from *G, C, E,* / *C, E, G.* / 4, 6, 8. / 1, 3, 5.

This Chord is uſed but upon the Governing-note or Fifth of the Key, but not ſo often as the perfect Chord, or that of the Seventh.

Enumeration

Enumeration of Diſcords, *or Diſſonant* Chords, *derived from the* Chord *of the Seventh.*

7. The Chord of the Seventh to a Governing-note, or Fifth of the Key, is compoſed of

G,	*B*,	*D*,	*F*.
1,	3,	5,	7.

Chords *inverted, derived from the* Chord *of the Seventh.*

$\frac{6}{5}$♭, or 5♭. The Chord of the flat or falſe Fifth is compoſed of 1, 3, 5♭, 6, inverted from *B*, *D*, *F*, *G*,

G,	*B*,	*D*,	*F*.
6,	8,	10,	12.
1,	3,	5,	7.

This Chord is never uſed but upon the Leading-note or ſharp Seventh of the Key.

6♮. This Chord is called the ſmall Sixth, and is compoſed of 1, 3, 4, 6, inverted from *D*, *F*, *G*, *B*,

G,	*B*,	*D*,	*F*.
4,	6,	8,	10.
1,	3,	5,	7.

This Chord is generally uſed upon the ſecond Note of the Key.

4♮. This Chord is called the Tritonus, and is compoſed of 1, 2, 4♮, 6, inverted from *F*, *G*, *B*♮, *D*,

G,	*B*,	*D*,	*F*.
2,	4,	6,	8.
1,	3,	5,	7.

This Chord is never uſed but upon the fourth Note.

It is to be obſerved, that the Key-note lends its perfect Chord but to its Third and Fifth; the Third under the Name of Sixth, and the Fifth under that of $\frac{6}{4}$; ſo that, when you can in all Keys diſtinguiſh the Third and Fifth, you may at the ſame Time know what Chords are to be taken, though the perfect Chord more properly belongs to the Fifth or Governing-note than the Chord of $\frac{6}{4}$; and even the Chord of the Seventh ſeems to belong only to the Fifth, eſpecially when it immediately precedes the Key-note; but let not the Difference between the perfect Chord, and that of the Seventh, puzzle you, ſince this laſt Chord conſiſts only in a Note or Sound added to the perfect Chord, which the Compoſer is at Liberty to leave out; ſo that, wherever the Chord of the Seventh might be uſed, you may take only the perfect or common Chords; yet, as it is proper to know what we are about, it muſt not be left out without a Reaſon, eſpecially as this Chord of the Seventh is the Origin of al

Diſcords; the Knowledge of its Progreſſion, that is to ſay, of the Chord that is to ſucceed it, being as neceſſary, as that of its Conſtruction, *i. e.* of the Sounds or Notes of which it is compoſed, ſince it is upon its Conſtruction and its Progreſſion that all other Diſcords, or Chords diſſonant, are regulated.

If we have ſaid, that the Fifth of the Key carried the Chord of the Seventh, only when it preceded the Key-note, it is to be at the ſame Time underſtood of all the Notes which compoſe the perfect Chord of that ſame Key-note; that is to ſay, of the Third, and even of that ſame Fifth, when thoſe two Notes bear the Chords derived from the Perfect, the Fifth may carry the Chord of Six and Four, after that of the Seventh, when its Length may permit it, at the Will and Pleaſure of the Compoſer; and, as the Notes derived from the Key-note are to be preceded in the ſame Manner as the Key-note, ſo likewiſe the Derivatives of the Fifth of the Key cannot be deemed as ſuch, unleſs they immediately precede that ſame Key-note, or its Derivatives; and one muſt not only conſider a Chord in its Conſtruction, and in its natural Progreſſion, but alſo in the different Diſpoſition that may be given to the Notes that compoſe it, by placing in the upper Parts thoſe that are found in the Baſs, or by placing in the Baſs thoſe that are in the upper Parts; which obliges us to give different Names to one and the ſame Chord, according to its different Diſpoſition, and in order to know, at the ſame Time, thoſe Notes which ought in that Caſe to accompany the Baſs; and as it is known that the Third and the Fifth (which compoſe the perfect Chord of the Key-note) may repreſent the Key-note, by bearing a Chord derived from the Perfect, when thoſe Notes happen to be in the Baſs; ſo likewiſe the Notes which compoſe the Chord of the Seventh, to the Fifth of the Key, cannot immediately appear preceding the Key-note, or its Derivatives, without bearing a Chord derived from the Seventh; and, therefore, it muſt be remembered, that if, in the Key of *C*, one of theſe Notes *G*, *B*, *D*, or *F*, ſhould immediately precede *C*, or *E*, in the Baſs (we omit *G*, becauſe it is our chief Subject in the Chord of the Seventh) the three other Notes are to accompany it. We have ſaid that the Fifth or Governing-note might carry the perfect Chord as well as the Seventh, and beſides, that the perfect Chord always ſubſiſted in that of the Seventh; therefore, the Chord of the Seventh muſt be preceded in the ſame Manner as the Perfect; which obliges us to attribute a Governing-note to all thoſe Notes that bear the Chord of the Seventh; and as a Governing-note is always a Fifth above, or a Fourth below the Note governed, it is not difficult to comprehend that *G* can have but *D* for its Governing-note; and as a Note is called a Governing-Note, but by reaſon only of its being a Fourth below, or a Fifth above, it can carry in that

that Caſe but the Chord of the Seventh; ſo that, by following the ſame Diſpoſition that we have given to the Chord of the Seventh to the Note *G*, we ſhall find that of the Note *D* between theſe Notes *D*, *F*, *A*, *C*; from whence we conclude, that the Note *D*, or thoſe comprehended in its Chord, cannot appear in the Baſs immediately before the Note *G*, without their Chord being compoſed of any other Notes than *D*, *F*, *A*, *C*, in the ſame Manner as *G*, *B*, *D*, *F* ought to compoſe the Chord to each of thoſe ſame Notes, when the Note *C* follows them; the harmonic Progreſſion of Diſcords being but a Succeſſion or Sequence of Governing-notes, or Fifths, which is not difficult to comprehend in its Bottom, as the Examples of Sevenths prove to us; and it is by the Relation there is between the fundamental Chord and its various Progreſſion, that ariſes the Liberty we have of uſing indifferently any one of the Notes contained in the fundamental Chords, which are the Perfect and the Seventh; and it is in this Relation that all our Attention is hardly ſufficient; nevertheleſs, by keeping it within the Compaſs of an Octave, it is only neceſſary to know the Manner how a Concord, or a conſonant Chord, is to be preceded, having given to underſtand, that a Diſcord is not preceded by any other Manner; and thus we ſay, without making uſe of the Names of the Notes, but only of the Interval which each of thoſe Notes makes with the Key-note, in order that it may ſerve for all Keys in general; for when it is neceſſary but to know how to diſtinguiſh the Key-note, you will then have got over moſt Difficulties.

The Key-note carries the perfect Chord; its Third always carries that of the Sixth; and its Governing-note, or Fifth, always carries the Perfect, when it doth not immediately precede the Key-note; otherwiſe the Seventh *F* muſt be added to its perfect Chord *G*, *B*, *D*.

The ſecond Note, which, in a diatonic Progreſſion, is between the Key-note, and its Third, can carry, in that Caſe, but the Chord of the ſmall Sixth *D*, *F*, *G*, *B*.

The Leading-note, or ſharp Seventh, which in aſcending precedes the Key-note, muſt carry the Chord of the falſe or flat Fifth *B*, *D*, *F*, *G*; but when in deſcending it precedes another, which is not contained in the Chord to the Key-note, then it is deemed but as the Third to the Governing-note, or Fifth of the Key; and in that Caſe muſt carry the Chord of the Sixth *B*, *D*, *G*, inverted from *G*, *B*, *D*,

The fourth Note, which in aſcending precedes the Governing-note, muſt in that Caſe carry a Chord like unto that of the Leading-note, when the Leading-note aſcends to the Key-note, ſince the Key-note and its Fifth muſt be preceded alike; ſo that, as the Leading-note or ſharp Seventh hath carried in that Caſe a Chord derived from the Fifth, ſo likewiſe the Fourth will carry

a Chord derived from that Note, which is the Governing-note, or Fifth, to that Fifth. So that, if *G* governs *C*, *D* for the ſame Reaſon governs *G*; and as, in the Key of *C*, *F* is the fourth Note, it will then carry the Chord of $\frac{6}{5}$, or the great Sixth *F*, *A*, *C* and *D*, derived from that of the Seventh *D*, *F*, *A*, *C*.

This Chord of the great Sixth differs from that of the falſe Fifth, but in reſpect to the Fifth which is perfect one Way, and flat or falſe the other; which proceeds from the different Species of Thirds, which is ſharp between *C* and *E*, and flat or minor between *D* and *F*; for it may be obſerved, that the Diſpoſition of theſe two Chords is the ſame, and they are taken equally upon the Third to the fundamental Note, on which the Chord of the Seventh is uſed; we ſhall in its proper Place ſhew the Reaſon why this Diſtinction is made upon the derivative Chords, and not upon the Fundamental.

This ſame fourth Note, which in deſcending, precedes the Third, muſt carry the Chord of the Tritonus *F*, *G*, *B*, *D*.

The ſixth Note, which one Way or other precedes the Fifth and its Third, muſt carry the Chord of the ſmall Sixth *A*, *C*, *D*, *F*, inverted, or derived from that of the Seventh to *D*, which governs *G* in the ſame Manner as the Second, in the like Caſe, carries the like Chord, when it precedes the Key-note or its Third.

If theſe Particulars be examined with the Enumeration of Chords, it will give a better and a clearer Idea of the Whole, obſerving that the Fifth, or Governing-note, may be deemed or looked upon as a Key-note, by reaſon that thoſe two Notes are equally preceded by the ſame Chords, which fixes the Object; and obſerving alſo, in a diatonic Progreſſion, thoſe Notes which derive from the Chords affected, or adapted to the Key-note and its Fifth, and the Notes that follow them; becauſe that one and the ſame Note may happen to belong to two different fundamental Chords, in which Caſe, in order to fix the Chord that it ought to carry, we muſt be be guided by the next Note that follows it, taking Notice of the three or four Notes that compoſe the perfect Chord, or that of the Seventh, and with which the Note in the Baſs ought to be accompanied in the upper Parts.

CHAP.

CHAP. X.

Of the continued Baſs.

WE muſt not confound the diatonic Progreſſion of a Baſs, which we now ſpeak of, with the conſonant Progreſſion, of which we have given ſome Examples upon the perfect Chord, and that of the Seventh; theſe two Chords are the Fundamental, and as a Proof of it, we ſhall hereafter, under our Examples, place that Baſs which we call Fundamental, the Notes of which will carry but perfect Chords, or of Sevenths, whilſt the Notes of the uſual Baſs, which we call continued, will carry Chords of all Species, the Whole making together a complete Harmony; ſo that this fundamental Baſs will ſerve as a Proof to all our Works and Examples, whereby it will be evident, that the ſeveral different Chords which will be therein uſed, will proceed only from an oppoſite Progreſſion to that of the fundamental Baſs, according to what we have juſt now explained, though the Chords, compared to one or the other Baſs, will be always the ſame in the main, their Difference proceeding from the Liberty of placing in the Baſs any one of the Notes contained in the fundamental Chords; but all the Notes of the Chord taken together will always be the ſame, and the Progreſſion, fixed to them by the fundamental Chords, will not be thereby altered.

CHAP. XI.

Of the Progreſſion of the Baſs, *which fixes at the ſame Time that of the* Chords, *and of the Manner of reducing a derivative* Chord *to its Fundamental.*

THE Progreſſion of the Notes of a Baſs that carry conſonant Chords, ſuch as the Key-note, its Third, and its Governing-note, or Fifth, is not limited, provided that that Progreſſion be not foreign to the Key compoſed in; but, as at preſent the Queſtion is only of one Key, one cannot be miſtaken, by uſing only the Notes *C*, *D*, *E*, *F*, *G*, *A*, *B*.

The Progreſſion of the Notes of a Baſs that carry Diſcords are limited, ſuch as the Governing-note, when it carries the Chord of the Seventh, and all its Derivatives, or rather thoſe which do not carry the perfect Chord, or any of its Derivatives; becauſe, as ſoon as a Note carries a Diſcord, it is certain that it governs another; and if the Diſcord is not that of the Seventh,

venth, it is certain that it proceeds from it; it will then be only by reducing it to its original or fundamental Chord, that you may ſurely know the Chord that muſt follow, whatever Note happens to be in the Baſs.

In order to reduce a Diſcord to its original fundamental Chord, it muſt be obſerved, that there are always two Notes, or

F, G, C, D,

two Numbers together, as 3, 4, 5, 6, *&c* which is likewiſe found in the Seventh, by placing the Note of the Baſs at its

F, G, C, D,

Octave, thus: 7, 8; ſo likewiſe of the Second, 1, 2. This being the Caſe, the uppermoſt Note, or the higheſt Number, muſt be placed at the fundamental Baſs, and it will be found that the lowermoſt Note, or the leaſt Number, always makes the Seventh to the other, by thus reducing derivative Chords to their original fundamental Chords 1, 3, 5, 7, as we have enumerated at Page 27. So that, if the Note *G* ſhould be found in the Baſs after the Reduction, it is certain that the Note *C* will follow it; and if you ſhould not meet with it in the Baſs, you will certainly find one of thoſe that compoſe its perfect Chord, or that of the Seventh, ſuppoſing that you was in another Key; ſo likewiſe, if the Note *D* ſhould be found in the fundamental Baſs, the Note *G*, or its Derivatives, will follow; ſo of the others; obſerving that, after a Chord of the Seventh, the fundamental Baſs muſt always deſcend a Fifth.

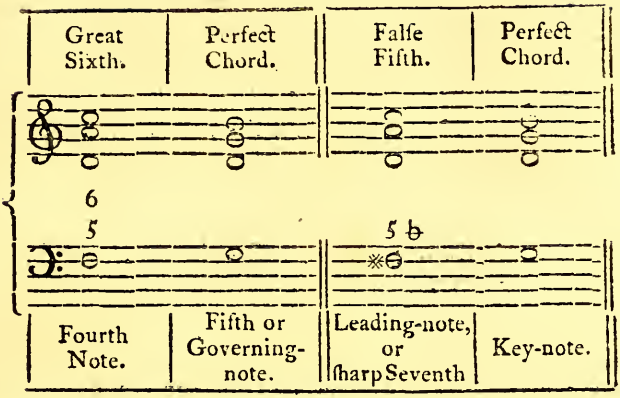
What we have ſaid of a Baſs already compoſed, muſt be alſo underſtood of the Manner of compoſing it; and if this rule ſhould meet with ſome Exceptions, as in the falſe and irregular Cadences, *&c.* one muſt not as yet think of it.

Before we give an Example of what we have already mentioned, it muſt be obſerved, that the Chord of the Notes, which, in a natural Progreſſion, leads to thoſe that ought to carry a perfect Chord, is to be ſuited to the Note that follows it, and not to that which precedes it; and that this Progreſſion is generally made from the Key-note to its Fifth, or *vice verſa*, from the Fifth to the Key-note, by ſuppoſing the Fifth to be a Key-note, as we have before mentioned; ſo that in a diatonic Progreſſion, by knowing the Chords that lead you to one of thoſe Notes, you will certainly know thoſe that lead to the other; from hence we give for a general Rule.

1. That all Notes that precede by aſcending a whole Tone, or a Semitone, that Note on which the perfect Chord is taken, are to carry the Chord of $\frac{6}{5}$, or the great Sixth, or the Chord of the flat or falſe Fifth.

EXAMPLE.

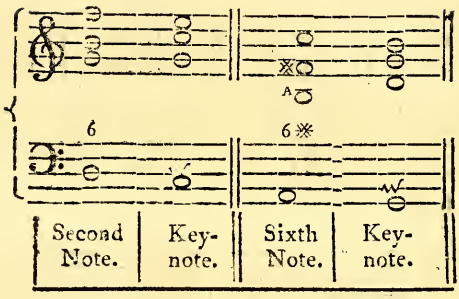
E X A M P L E.



Obſerve that the Difference of theſe two Chords is only in the Baſs; for, whether you aſcend a whole Tone, or a Semitone, upon a Note that bears common Chords, the Chord of the upper Parts will always be the ſame; the Compoſer being at Liberty to cauſe his Baſs to proceed by a whole Tone, or a Semitone, even though he ſhould be in a Key wherein the Semitone did not properly belong, by reaſon that as the Fifth, or Governing-note, may be taken for a Key-note, we may introduce all the Sounds that naturally precede a Key-note, by adding (as the Example ſhews) a Sharp to the fourth Note, which in that Caſe is changed, and becomes a Leading-note, or ſharp Seventh; and it is by this Progreſſion of a whole Tone, or a Semitone, aſcending upon a perfect Chord, that a Governing-note may be diſtinguiſhed from a Key-note, the Baſs aſcending a whole Tone upon a Governing-note, and a Semitone upon a Key-note; and though, by this Progreſſion of a Semitone, the Attributes of a Key-note are given to a Governing-note, yet we may afterwards continue in the original Key, notwithſtanding that ſame Governing-note appeared as a Key-note, for after a perfect Chord, we may remove into any other Key.

2. All Notes that precede in deſcending thoſe that carry common or perfect Chords, are to carry the Chord of the ſmall Sixth.

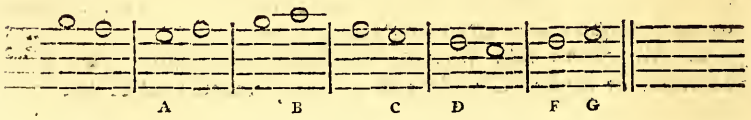
E X A M P L E.



The Guides ſhew that the Baſs may aſcend upon the Third to each of thoſe Notes that carry common Chords, without altering the upper Parts, and of Courſe, thoſe Thirds will then carry the Chord of the Sixth.

We cannot well in this Place perceive the Difference between a ſecond Note and a Sixth, and from a Key-note and its Fifth, by reaſon that the perfect Chord, which the Fifth, or Governing-note, carries, requires to be preceded alike, which doth not give us Room to diſtinguiſh them in a ſharp Key; for in a flat Key, the ſixth Note, which falls upon the Fifth, is but a Semitone higher, whereas the ſecond Note is always a whole Tone above the Key-note; moreover, the Governing-note, or Fifth, always hath its ſharp Third, whereas the Key-note hath only a flat Third in a flat Key; but, if a Governing-Note cannot be diſtinguiſhed in a ſharp Key, let it not puzzle you, becauſe in that Caſe you may uſe it as a Key-note, by ſuiting to its Key the Chords of the Notes which precede it; and by what follows, it may be eaſily known, whether it be truly a Governing-note, or a Key-note.

E X A M P L E.



The Progreſſion of the firſt Note to the Note at *(A)* doth not give any Room to diſcover whether the Note at *(A)* be a Key-note, or a Governing-note; which is of no Signification, by reaſon that the Chords aſſigned to either of thoſe Progreſſions are the ſame; but it is obvious that the Progreſſion from *(A)* to

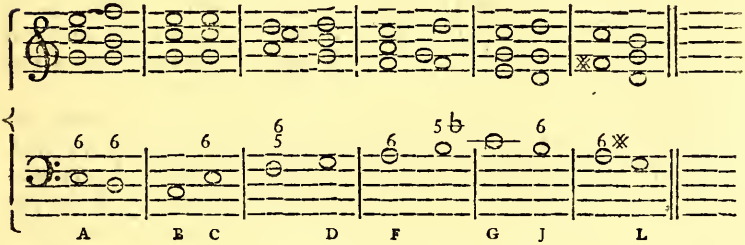
(B)

(B) leads to a Key-note, therefore *(A)* is the Governing-note. If the Progreſſion from *(B)* to *(C)* leaves us doubtful, the Note at *(D)* ſhews that the Note at *(C)* is the Governing-note; in like Manner, that at *(F)* ſhews that ſame Governing-note at *(G,)* becauſe, in all Keys, the Note immediately below the Key-note is but a Semitone; whereas there is a whole Tone between a Governing-note and that which is immediately below it.

If in a flat Key, deſcending from the Key-note to its Fifth, or at leaſt to its Sixth, the Note immediately below the Key-note is a whole Tone, the flat Third to the Note diſtinguiſhes it, becauſe the Governing-note, or Fifth, muſt always have its ſharp Third.

3. All Notes that are a Third above, or below the Key-note, or the Governing-note, muſt carry the Chord of the Sixth, when the Progreſſion of the Baſs leads to one of thoſe two Notes.

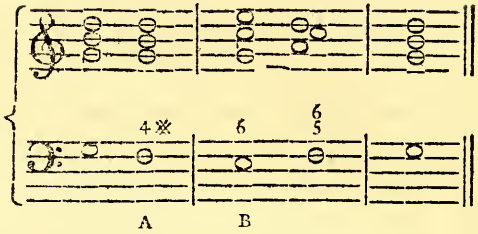
E X A M P L E.



The Progreſſion of the Baſs which leads to the Notes at *(B) (D) (G)* and *(L)*, where the perfect Chord is taken, obliges us to give the Chord of the Sixth to the Notes at *(A) (C) (F)* and *(J)*.

4. The Third, repreſenting the Key-note, by reaſon that the Chord of the Sixth upon the Third is the ſame as the common or perfect Chord upon the Key-note; we muſt give the Chord of the Tritonus to the fourth Note deſcending upon the Third, though one may give it alſo the Chord of the great Sixth: but we ſhall ſpeak of it elſewhere.

E X A M P L E.

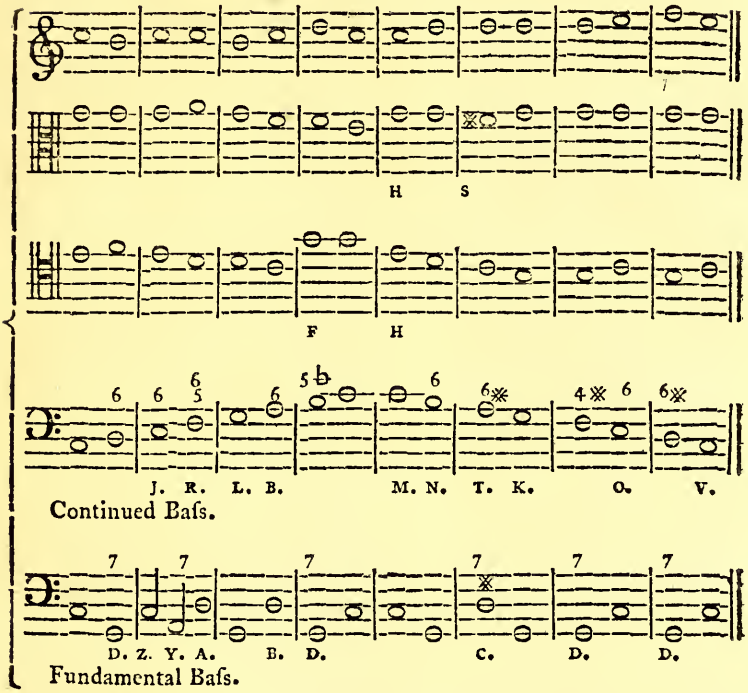


(A) the fourth Note deſcending upon the Third at *(B)*.

By theſe five laſt Examples, we can draw very uſeful Inferences, by obſerving the different Diſpoſition of the Sounds of which a fundamental Chord is compoſed, according to the different Progreſſion of the Baſs; for if the Fourth bears the Chord of the great Sixth aſcending upon the Governing-note, or Fifth; if it carry the Chord of the Tritonus deſcending upon the Third; if the Leading-note, or ſharp Seventh, bears the Chord of the flat or falſe Fifth; and if the Second and the Sixth carry the Chord of the ſmall Sixth deſcending upon the Key, or upon the Governing-note, or Fifth, it is viſible that theſe different Chords are but one and the ſame Chord, and derived from that of the Seventh upon the Notes which in that Caſe govern thoſe that follow; which will be more clearly explained, by placing a fundamental Baſs under a general Example of all we have hitherto ſaid; wherein it will be obſerved, that the Leading-note, or ſharp Seventh, is ſuch but in aſcending to the Key-note: for, if it deſcends, then it becomes but a Third to the Fifth, or Governing-note of the Key; though this laſt Note may in that Caſe be looked upon as a Key-note, in order that we may not be miſtaken.

General

General Example of the Octave *aſcending and deſcending.*



As the fundamental Baſs is placed under the other Parts, only as a Proof that all their Harmony is included and comprehended in the perfect Chord and that of the Seventh, one muſt not examine, if the Rules are ſtrictly obſerved between the Parts and the fundamental Baſs; but only whether there be found any other Chords than thoſe that are figured over each Baſs; for the Sequence of the Sounds are to be examined but with the continued Baſs, ſince the Queſtion at preſent is of a diatonic Progreſſion given to the Baſs.

1. After having obſerved in the continued Baſs the ſame Succeſſion, or Sequence of Chords, from *J* to *L*, and from *B* to *M*, aſcending to the Governing-note, or to the Key-note, as from *N* to *K*, and *O* to *V*, deſcending to the Fifth, or to the Key-note, it may be thereby inferred that the Whole is relative to each of thoſe two Notes which are the only Notes that can naturally bear the perfect Chord in any Key whatever, remembering that thoſe Notes, which are a Third above, are deemed Thirds, when the Baſs deſcends from theſe to the Firſt, though the

the Third to the Key-note will always be ſuch, whatever Road it takes; and that a perfect Chord cannot be preceded by a Diſcord, but by that which governs it; thus it appears that the Chords of the ſmall and great Sixth, of the falſe or flat Fifth, and Tritonus, are no other but that of the Seventh to the Notes, in the fundamental Baſs, which naturally govern thoſe that follow. The ſmall Sixth to the ſecond Note, the flat or falſe Fifth to the Leading-note, or ſharp Seventh, and the Tritonus to the Fourth, derive from the Chord of the Seventh upon the Governing-note of the Key *D*, after which immediately follows the Key-note; the great Sixth to the fourth Note, and the ſmall Sixth to the ſixth Note, alſo derive from the Chord of the Seventh to the ſecond Note at *A* and *C*, which governs in that Caſe the Fifth, or Governing-note of the Key, and which ſaid Fifth immediately follows; and the Chord of the Sixth is given to the Third, the Sixth, and the Leading-note, or ſharp Seventh, only becauſe that thoſe Notes are a Third above or below the Key-note, or the Fifth, to which the Progreſſion of the Baſs leads us immediately afterwards.

2. It would be imagined, that the ſixth Note at *(B)* ought to carry the Chord of the ſmall Sixth, agreeable to that of the Seventh, which is figured over the Note at *(B)* in the fundamental Baſs; but we leave out one of the Sounds that make the Diſcord for divers Reaſons; firſt, becauſe it is indifferent; ſecondly, becauſe, the next following Note in the Baſs being the Leader, or ſharp Seventh, and as ſuch creating a Diſcord Major (as we ſhall hereafter explain) and as Diſcords ought not to be doubled, we could not for that Reaſon, and in this Caſe, give the Chord of the ſmall Sixth to the ſixth Note, without cauſing the Third to that Sixth to deſcend upon the Diſcord Major; and the laſt Reaſon is, that our Rule for taking the Chord of the Sixth, upon all ſuch Notes that precede thoſe that are a Third above or below thoſe on which the perfect Chord is taken, ſubſiſts.

3. If the fourth Note *R* had not been placed in the continued Baſs, and the ſecond Note *A* or *C*, or the Sixth *T*, had been taken in its Stead, immediately preceding the Governing-note *L* or *K*, we ſhould then have been obliged to ſharpen the Fourth, as we have done it at *S*, by reaſon that the Note on which the Common or perfect Chord is taken, chuſes to be preceded by its ſharp Seventh, or Leading-note, excepting in flat Keys, wherein the Sixth never deſcends but a Semitone upon the Fifth; and the ſharp Seventh in that Caſe cannot then be heard, whatever Note in the Baſs precedes that Fifth; for, if it was preceded by the ſharp Seventh, it would then be deemed the Key-note, and the true Key we then intended to compoſe

in

in could not be diſcovered but by the Notes that followed that Fifth; which is very plainly ſeen by our Example, where the Governing-note may be taken for a Key-note, it not appearing whether it be a Governing-note, or a Key-note, but by the Note that follows it; conſequently the Chord of the Tritonus derives from that of the Seventh to that ſame Governing-note which is found to be under it in the fundamental Baſs at *D.*

4. The diatonic Progreſſion of the continued Baſs alters that of the Parts at *(F,) (G,)* and at *(H;)* which cannot be otherwiſe, either to avoid two Octaves, or two Fifths, following each other, or for replacing one Part in its natural Poſition, and above the Baſs, or in order that all the Sounds of the Chord may be heard.

If the upper Parts are to follow a diatonic Progreſſion, it is only when the Baſs follows a Conſonant, and *Vice verſa*; beſides, it is ſometimes proper to alter the diatonic Order of one Part, in order to diverſify the Melody; one could even alter the Order and Progreſſion of thoſe Parts that are above the Baſs, without committing any Fault, but that is not at preſent our Subject.

5. There happen to be in our Example ſeveral Sevenths, without being prepared, which ſeems to contradict our firſt Rule; but of this we ſhall treat hereafter, and ſhall now keep only to the Progreſſion fixed to the Chords, according to the Order of this Octave; and we ſhall alſo hereafter ſhew, that, after a conſonant Chord, we are at Liberty to remove any where, provided we at the ſame Time obſerve the Rules of Modulation.

If it be permitted to make the fundamental Baſs to aſcend a whole Note, or a Semitone, the Progreſſion of a Third, and of a Fourth, is thereby always underſtood, as appears between the Notes at *(Z,) (Y,)* and *(A,)* where the Note *(Y)* is added; the Seventh to that Note being prepared by the Fifth *(Z,)* and the Third preparing the Seventh to the Note *(A,)* which doth not alter the Foundation of the Chords.

CHAP. XII.

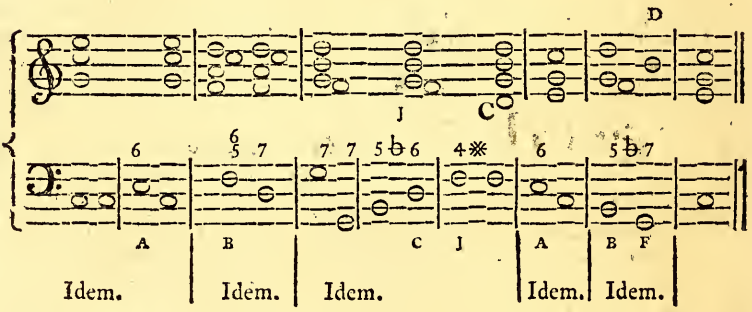
Of ſome other Rules taken from the laſt Example.

TAKE Notice, that when a Note in the Baſs ought to carry the Chord of the Seventh, you may always leave out that Note which makes the Seventh, unleſs it was found prepared

prepared by a Concord in the preceding Chord; though if that Concord was a Major, or a Sharp, as the Third and the Sixth may be, it will be better to make that Third, or Sixth, aſcend a Semitone; but if the Note of the Baſs carries only a Chord derived from the Seventh, you may ſtrike out of that Chord one of the two Sounds that makes the Diſcord; thoſe two Sounds being eaſily diſcovered, by reaſon that they are always joined together, according to what we have ſaid in Chap. XI.

The ſame Note in the Baſs may be repeated, by giving it the ſame Chord, or by giving it different Chords, as we increaſe in Knowledge how to do it.

You may ſkip from one Note to another, where the Chord differs but in the Name, by going from the Chord of the Seventh to that of the flat or falſe Fifth, upon the Third to that Note, on which the Seventh hath been taken; and, upon the Fifth to it, one may give it the Chord of the ſmall Sixth, and in like Manner one may give the Chord of the Tritonus to that which makes the Seventh; becauſe all theſe Chords are, in the Main, but one and the ſame Chord; ſo of the Others in the like Caſe; ſee the following Example.



Thoſe Notes, that are a Third above the Note which immediately afterwards bears common Chords, ought, generally ſpeaking, to bear a Chord derived from that which follows; ſee at *(A,)* where it is ſeen that the Chord of Sixth derives from the Perfect that follows it; and at *(B,)* where the Chord of the great Sixth, or the falſe Fifth, derives from that of the Seventh, which follows it.

When the Notes in the Baſs alter their Poſition, and the fundamental Chord ſubſiſts; all the other Parts may remain as they were, without altering them, as to what concerns conſonant Chords, or Concords; but, as to Diſcords, it ought to be contrived, that all the four Notes, or Sounds of which they are compoſed, be heard together, which may be done by adding the

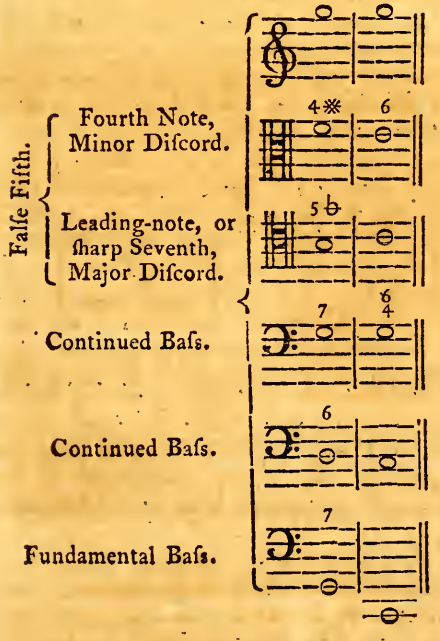
Octave

Octave of the Note you quit *(D,)* if it had not a Place in the Chord, to that ſame Note in the fundamental Baſs, or by leaving out the Octave to the Note *(F,)* in order to place in its Stead the Octave of the Note you quit *(C.)*

CHAP. XIII.

Of the perfect Cadence.

WE call a perfect Cadence, all Concluſions made upon a Key-note, preceded by its Fifth, or Governing-note; and this Key-note muſt always be heard upon the firſt Part, or Diviſion of the Meaſure, or Bar, in order that the Concluſion may be the better diſcerned; and in that Caſe its Governing-note which precedes it, ought to carry the Chord of the Seventh, or the Perfect, becauſe the Seventh may be therein underſtood; ſee the following Example.



It is by the Means of this perfect Cadence that we can judge what Notes of a Baſs are to bear perfect Chords; becauſe, wherever we feel the Melody to reſt, it is certain that in that Place the perfect Chord muſt be heard; and this Reſt doth not only make itſelf felt in the moſt natural Progreſſion of this Cadence, but likewiſe in the Progreſſion ariſing by the Sounds uſed for its Accompaniment, the Diſpoſition of which is on the other Side, each Part being figured according to the Chord it ſhould bear if it was placed in the Baſs, remembering that the perfect Chord may be heard after the great Sixth, as well as after the falſe Fifth; ſo that, provided

vided we do not go out of the Key, it is but upon the Key-note and its Fifth, that the Melody may reſt, which fixes the Object in ſuch a Manner, that whatever Progreſſion is given to a continued Baſs, we may feel and know, at the ſame Time, thoſe Notes on which the Melody may reſt, and the Chords that are to precede it, according to the different Progreſſions of that Baſs, as it is marked in each Part; for whatever Part is choſen for Baſs, the other Parts will always accompany it in the like Caſe. In order to give a better and clearer Idea of it, we ſhall ſhew the Power of the Leading-note, or ſharp Seventh, in this Caſe; how by its Means we diſtinguiſh the Diſcords, and the Obligation it lays us under in the Order and Diſtribution of the Chords.

CHAP. XIV.

Of the Leading-note, *or ſharp* Seventh, *and of the Manner of reſolving all* Diſcords.

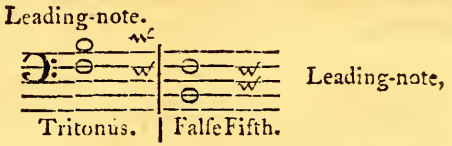
AS ſoon as the Leading-note appears in a Chord diſſonant, it is certain that it determines a Concluſion of Melody, and therefore it muſt be followed by the perfect Chord upon the Key-note, or its Derivatives; whereas, if the Leading-note, or ſharp Seventh, doth not appear in a Chord diſſonant, the Concluſion is not determined, and this diſſonant Chord muſt be followed by another, and ſo on ſucceſſively from one Chord to another, until the Leading-note, or ſharp Seventh, be heard, which then determines a Concluſion, or at leaſt an Imitation of it, as when we fall upon the Third, inſtead of the Key-note. The Examples we have given of the Seventh prove what we here advance, ſince, after the firſt Chord of the Seventh, there always follows another, and ſo on until the Governing Note of the Key, where the Leading-note, or ſharp Seventh, is then heard.

Remember that, notwithſtanding the Rule we have juſt now given, the Common or perfect Chord, to a Fifth, or Governing-note, may follow that of the great Sixth to a fourth Note, though the ſharp Seventh doth not take Place in this laſt Chord, which notwithſtanding is a Diſcord.

To diſtinguiſh at preſent the Leading-note, or ſharp Seventh; in a diſſonant Chord, there muſt abſolutely be found therein an Interval of a falſe Fifth, or of a Tritonus, either betwixt the Parts, or betwixt one Part and the Baſs; and thoſe Intervals muſt be made up of the ſharp Third and of the Seventh to the fundamental

fundamental Note of a Chord of the Seventh, this Note being always the Governing-note of the Key, otherwiſe the Rule would be falſe; ſo that, in the Key of *C*, the falſe Fifth, or the Tritonus, will be found to be betwixt the Notes *B* and *F*, according to their different Diſpoſition, the one making the ſharp Third, and the other the Seventh to *G*, which is the Governing-note of the Key.

E X A M P L E.



The ſame Thing will be found in the Example of the perfect Cadence; ſo that, whatever Part of this Cadence is choſen for Baſs, the other Parts being to accompany it, one of theſe two Intervals will always be found; becauſe their Difference ariſes only from the different Diſpoſition or Tranſpoſition of the two Notes that compoſe one or the other of thoſe Intervals.

The Guides ſhew the natural Progreſſion of thoſe Intervals, as it is marked in the perfect Cadence, from whence a ſure and certain Rule is taken for the Progreſſion of Diſcords, which is called the Reſolution.

As we have diſtinguiſhed the Third by Major and Minor, ſo likewiſe we diſtinguiſh all Diſcords by Major and Minor.

All Major Diſcords are thoſe that ariſe from the Leading-note, or ſharp Seventh; and as this Note ought naturally to aſcend a Semitone to the Key-note (which is obvious by the preceding Examples) all Major Diſcords are to do the like.

In order to diſtinguiſh a Major Diſcord, you muſt know the Key you are in, and you will find that every Time that a Note which is but a Semitone below the Key-note, happens to be in a diſſonant Chord, that ſame Note will be the Major Diſcord; otherwiſe, by reducing a Chord to its Fundamental, you will find, that it will always be the ſharp Third to the Governing-note of the Key, bearing the Chord of the Seventh: therefore the ſharp Third to the Governing-note of the Key, bearing a Chord of a Seventh, may be deemed a Major Diſcord, and conſequently the Leading-note, on which the falſe Fifth it taken; the ſharp Sixth to the ſecond Note of the Key, and the Tritonus to the Fourth, are likewiſe Major Diſcords.

All Minor Diſcords are thoſe which ariſe from that Note that makes the Seventh to the fundamental Baſs; and theſe Diſcords

are to be reſolved by deſcending diatonically; ſuch are the Seventh and the falſe Fifth.

When you do not meet with the Major Diſcord in a diſſonant Chord, it is certain that the Minor Diſcord only takes Place; but this laſt always meets with the Major, which doth not alter their fixed Progreſſion.

Thus it is that one may at once be inſtructed in the various Ways of reſolving Diſcords, which doth not conſiſt in their different Progreſſion, but only in that of the Baſs, where it is permitted to paſs to each of the Notes of the Chord that is to be naturally heard; which may be always known by reducing it to its Fundamental.

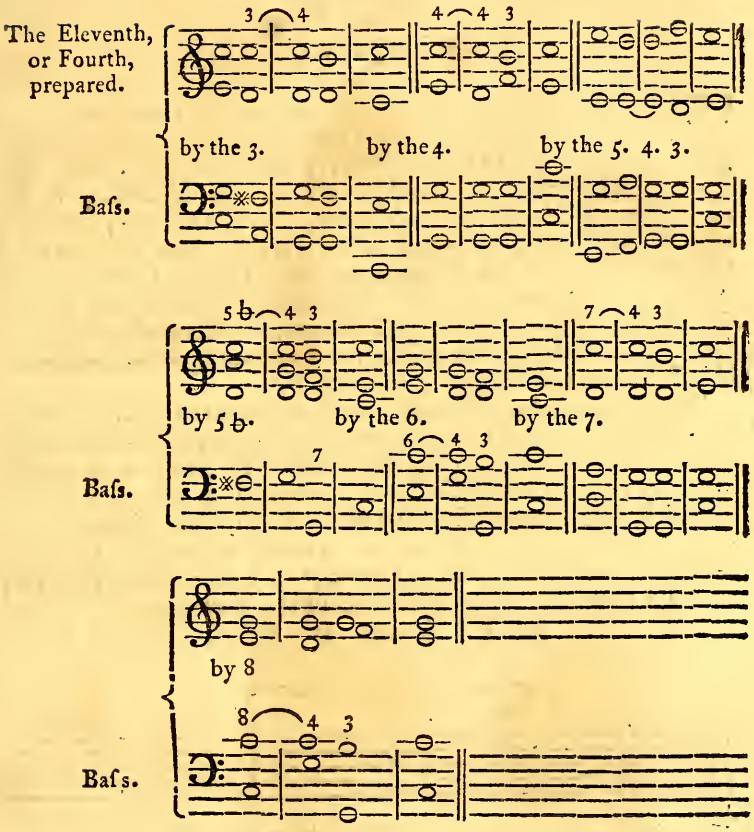
CHAP XV.

Of the Eleventh, *otherwiſe called the* Fourth.

THE perfect Cadence is generally preceded by a diſſonant Chord, hitherto called the Fourth, but which ought rather to be called the Eleventh; this Chord, on this Occaſion, differs from the Perfect, only by taking the Fourth inſtead of the Third, and therefore is never uſed but upon ſuch Notes as ought naturally to bear the perfect Chord, or that of the Seventh, one of which two Chords always follows it upon the ſame Note that the Fourth was taken; the Diſcord which the Fourth creates being by this means reſolved by deſcending diatonically upon the Third; and therefore muſt be reckoned and admitted among the Minor Diſcords; we ſhall more fully explain it, when we ſhall ſpeak of Diſcords by Suppoſition. Here follows only an Example of all the different Ways of preparing it, and of its Reſolution.

EXAM-

E X A M P L E.



The Eleventh, which to follow the Cuſtom we figure by a 4, is prepared (as appears by the Example) by all the Concords, and even by the falſe Fifth, and by the Seventh; which may be obſerved at all thoſe two Notes bound by a Semicircle ⁀, and is always prepared at the ſecond or laſt Part of the Bar, and heard upon the firſt Part of the next ſucceeding Bar.

One muſt ſtick cloſely to the Key of *C*, in order to know all theſe different Preparations, which proceed from the different Progreſſions of the Baſs, by reaſon that it is the ſame Thing in all other Keys; this was not ſtrictly the proper Place to ſpeak of this Diſcord, but as the perfect Cadence is ſeldom uſed without its being preceded by it, and even ſeveral Authors not having ſeparated it from that Cadence, we thought it not improper to follow them on this Occaſion.

CHAP.

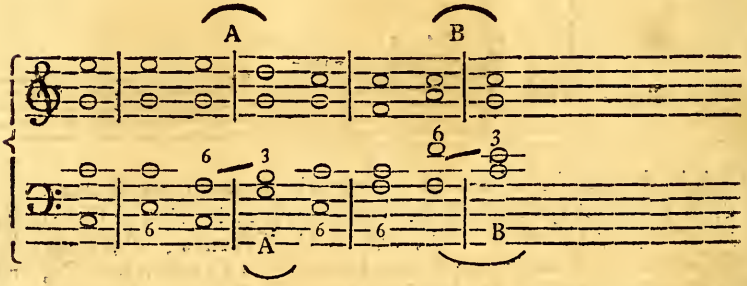
CHAP XVI.

Of the irregular Cadence.

THE irregular Cadence is uſed upon the Governing-note, or Fifth, preceded by its Key-note; whereas the perfect Cadence is uſed upon the Key-note, preceded by its Fifth; and this laſt Cadence is by deſcending a Fifth, and the other is by aſcending a Fifth, in ſuch a Manner, that this laſt may be made upon the Key-note, preceded by its Fourth, ſince to deſcend a Fourth, or to aſcend a Fifth, is the ſame Thing; the two Notes which terminate this Cadence are naturally to carry the perfect Chord, but, by adding the Sixth thereto, the Concluſion is thereby more ſenſibly felt, and beſides we may thereby draw an agreeable Connexion of Harmony and Melody.

This Sixth, added to the perfect Chord, makes the Chord of the great Sixth, which the Fourth naturally carries, when it immediately precedes the Governing-note of the Key; ſo that by paſſing from the Fourth to the Key-note, by the ſame Chords that this Fourth ought to carry aſcending to the Fifth, and which the Key-note ought naturally to carry, this creates an irregular Cadence, in like Manner as by paſſing from the Key-note to its Fifth, by adding a Sixth to the perfect Chord of the Key-note.

EXAMPLE.



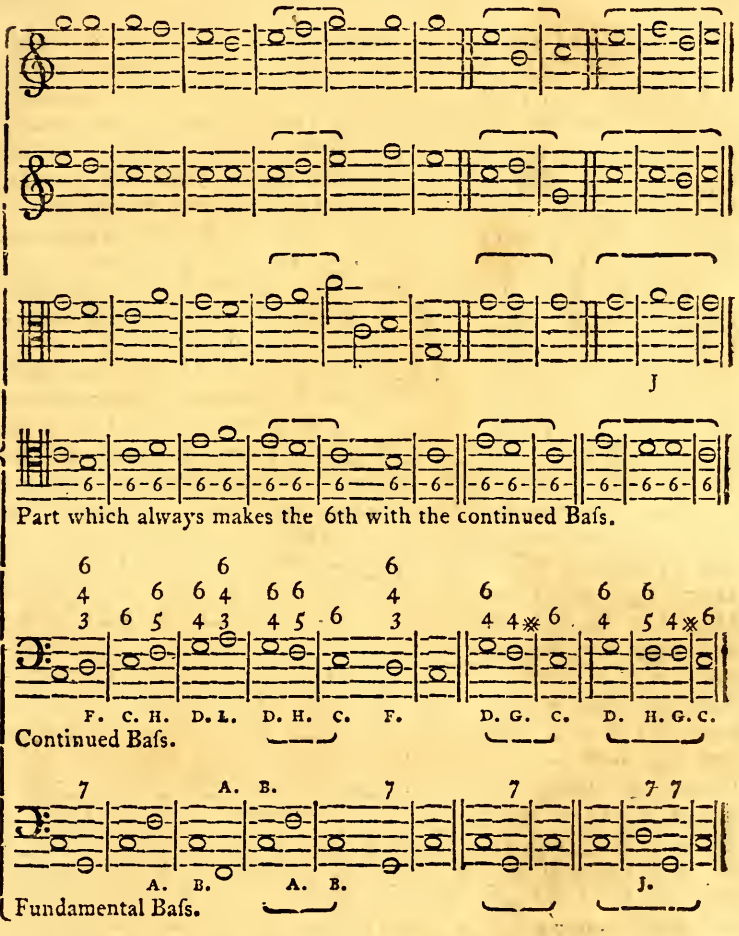
(A) An irregular Cadence from the Key-note to its Fifth.
(B) An irregular Cadence from the Fourth to the Key-note.

We find, in this Example, a Diſcord between the Fifth and the Sixth, which Diſcord proceeds by the Addition of the Sixth; and, as this Sixth cannot deſcend upon the Fifth, it muſt of Courſe aſcend upon the Third; ſee the Example where that Progreſſion is marked by a Stroke /.

This Sixth, added to the perfect Chord, gives us, in an inverted Manner, an eaſy Way of making four or five Parts to ſeveral Notes following

following the Baſs, with which one of the Parts always proceeds by a Sixth, without committing any Fault againſt the Rules, which is proved by the fundamental Baſs.

E X A M P L E.



A, *B*, irregular Cadences where the Sixth is added to the perfect Chord of the Note *A*.

Theſe ſix Parts might be heard together, excepting where the fundamental Baſs aſcends a Second to the Note that bears a Seventh,

Seventh, at which Place one of the Parts that makes two Fifths, together with that Baſs, ought to be altered: Obſerve thoſe two Parts that proceed always by Sixes, as well aſcending as deſcending, which with the Sixth, added to the perfect Chord, procures an eaſy Manner of making three other Parts, notwithſtanding that this Progreſſion be compoſed but of three different Chords.

You will find at *C* the perfect Chord to the Key-note, which cauſes that of the Sixth upon its Third; and at *D*, that of Six and Four upon its Governing-note, or Fifth. At *F* you will find the Chord of the Seventh to the Governing-note of the Key, which cauſes that of the ſmall Sixth to the ſecond Note; and at *G*, that of the Tritonus to the fourth Note. And laſtly, at *H*, you will find the perfect Chord upon the Fourth, to which the Sixth is added, which creates that of the ſmall Sixth to the ſixth Note *L*; but, as this ſame Chord is not always affected to an irregular Cadence, it then proceeds from that of the Seventh upon the ſecond Note *J*, where it follows its natural Progreſſion.

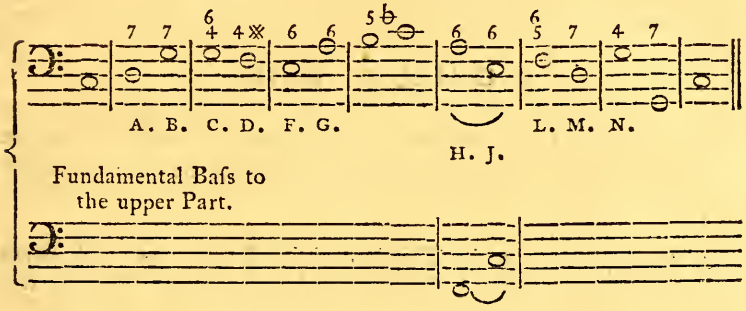
Before we had a Knowledge of theſe ſmall and great Sixes, it was almoſt impoſſible to add two Parts with theſe Sixes; whereas we can eaſily add three Parts, and even the fundamental Baſs may be added to it, which proceeds from an inverted Harmony, and by making the Harmony always ſuitable to one of the two Cadences we have ſpoken of, or to the natural Progreſſion of the fundamental Baſs, which will be found in our firſt Examples; for, if the Progreſſion of the Baſs is not limited after a conſonant Chord, yet the Chord that ought to be heard after it is limited, according to the Progreſſion of that Baſs; and, ſuppoſing that one could not eaſily reduce a certain Progreſſion of the Baſs to its Fundamental, you need only to obſerve the Place occupied by the Notes of the Key you are in, and the Key of *C* being only at preſent in Queſtion, and knowing that ſuch and ſuch Notes ought to bear ſuch and ſuch Chords, according to their different Progreſſion, you can never fail by giving to thoſe Notes the Chord that belongs to them in the like Caſe; and, Experience increaſing by Practice, you will become Maſter of the Choice of two different Chords, that may be heard upon one and the ſame Note; as may be obſerved in the laſt Example, where the Tritonus may be heard upon the fourth Note, inſtead of the great Sixth, or this laſt inſtead of the other, and even one after the other, by placing the great Sixth the firſt, all which may be practiſed when the fourth Note falls upon the Third, or the Key-note, having divided

the

the Bars where that happens by Strokes ⌐——¬ over or under the Parts as thus, $\overbrace{HC; GC; HG.}$

When the Progreſſion of the Baſs is like unto the Fundamental, you muſt give to each Note of that Progreſſion fundamental Chords, excepting when you go from the ſixth Note to the Third, in which Caſe the Harmony inverted from the irregular Cadence is extremely proper.

E X A M P L E.



We give the Chord of the Seventh to the ſecond Note *A*, becauſe the Progreſſion from *A* to *B* is fundamental.

We give the Chord of the Seventh to *B*, becauſe the Seventh is found to be prepared by the flat Third to the Note *A*; ſo that it is better to keep on that flat Third, than to make it aſcend upon the Octave, which is abſolutely forbidden, excepting that it be found to be doubled in a Compoſition of more than three Parts, in which Caſe we may make it to aſcend, whilſt the Rule holds in the other Parts that keep on. The ſharp Third being heard at *B*, we cannot avoid making it aſcend upon the Key-note, on which the perfect Chord is to be heard; but as this Key-note doth not appear in the Baſs, and there being but its Governing-note, or Fifth in its Stead, we are obliged to repreſent the Key-note, by giving to that Fifth of *C*, the Chord of Six and Four. We could have given the Chord of the great Sixth, as well as that of the Tritonus to the Fourth Note *D*, which deſcends upon the Third.

We cannot help giving the Chord of the Sixth to the Third *F*, by reaſon that the Diſcord to the preceding Note cannot be reſolved but by that Chord, though the Progreſſion of that Third to the ſixth Note *G* be fundamental; the Diſcord, which, in this Caſe, abſolutely requires to be reſolved, being our principal object.

Between the Notes *H*, *J*, you will find an irregular Cadence inverted; ſee the fundamental Baſs underneath it.

The Note *L* muſt carry the Chord of the great Sixth, which is the ſame as that of the Seventh, which the Note at *M* bears, and which is found to be a Third below, according to what we have before ſaid at Chap. XII.

The Note *M* bears the Chord of the Seventh for the like Reaſon as the Note *A*.

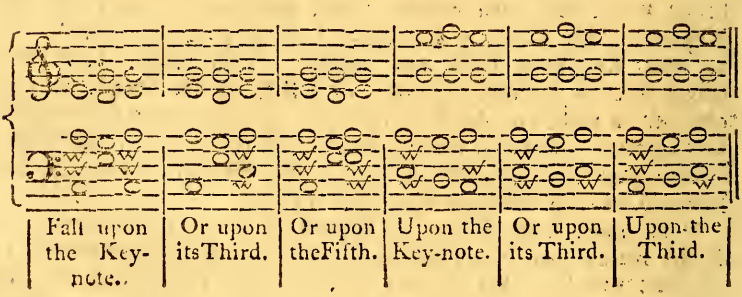
The Eleventh prepared by *M*, *N*, this Eleventh preparing the perfect Cadence that follows.

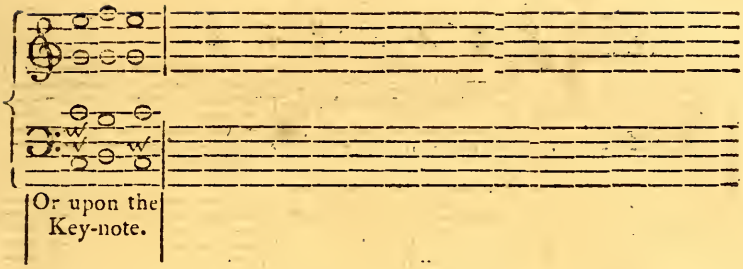
CHAP XVII.

Of the different Progreſſions of a Baſs *which bear a Relation to each other, wherein the Harmony doth not alter in the upper Parts.*

AS the Key-note, its Third, and its Fifth may each carry a Chord compoſed of the ſame Sounds, wherever the natural Progreſſion of a Baſs leads to the principal Note, which is the Key-note, we may place in its Stead one of the two other Sounds; ſo likewiſe if the Progreſſion leads to the Third, we may place the Key-note in its Stead; for the ſame Reaſon we may place, in Lieu of the Fifth, its Third, its Fifth, and its Seventh, when it carries the Chord of the Seventh, or its Third and Fifth, when it carries the perfect Chord; ſee the following Example.

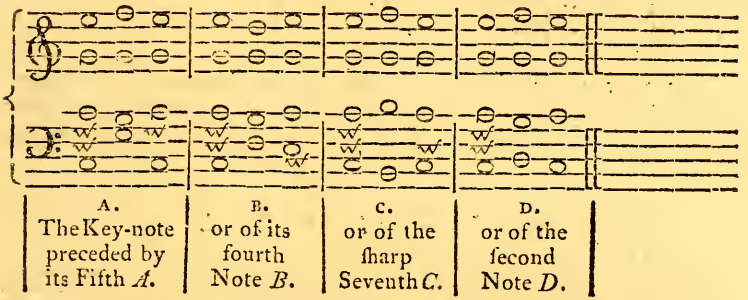
EXAMPLE.





The four laſt Falls and the Four following are not proper to the Governing-note or Fifth, becauſe they would, in that Caſe, paſs for a Key-note.

E X A M P L E.



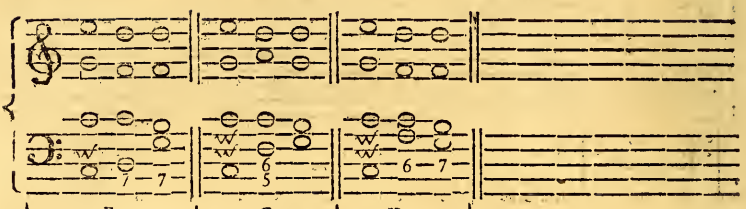
Although in the above Examples we have begun by the Key-note, we might have equally begun by the Third or by the Fifth; ſee the Guide ☞.

We do not pretend to ſpeak of the Beginning of a Piece, which is the proper Place for the Key-note, though one may treſpaſs upon this Rule in reſpect to Fuges, but we are not yet come to them.

When the ſecond Note immediately precedes the Governing-note, or Fifth, in that Caſe the Second governs that Fifth, and muſt carry the Chord of the Seventh; ſo that its Third and its Fifth may be placed in its Stead, and but ſparingly the Seventh, becauſe it is but the Key-note that can appear as ſuch in this Caſe with the perfect Chord.

E X A M-

E X A M P L E.



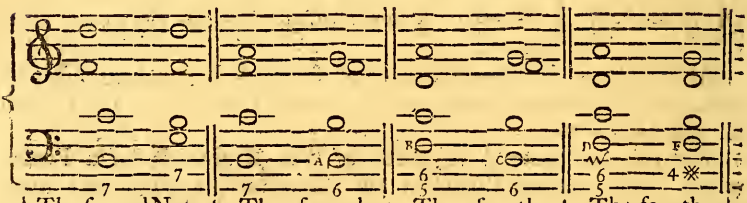
F. The Fifth of the Key, preceded by the ſecond Note, which in that Caſe is its Governing-note *F*.

G. Or by the fourth Note *G*, which is the Third to the ſecond Note *F*.

H. Or by the ſixth Note *H*, which is the Fifth to the ſecond Note *F*.

You may place all theſe Notes in the Room of each other, provided the Suit of the Harmony be not changed, to know which, you muſt reduce it to its Fundamental; ſee the following Example.

E X A M P L E.

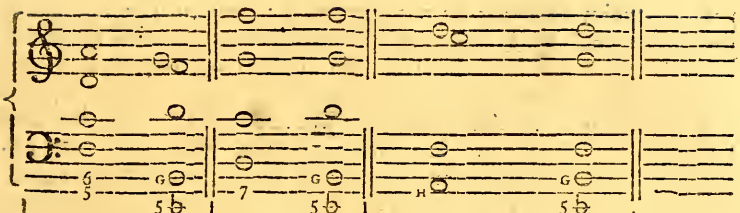


The ſecond Note which in this Caſe governs the Fifth of the Key, and which ſerves as a fundamental Baſs to the others.

The ſecond Note *A*, in Lieu of the Governing-note of the Key.

The fourth Note *B*, in Lieu of the Second, whilſt the Second *C* is in Lieu of the Fifth.

The fourth Note *D*, in Lieu of the Second, and at *F*, in Lieu of the Governing-note of the Key.



The Leading-note or ſharp Seventh *G*, which, after the fourth Note, is in Lieu of the Fifth.

The ſame Thing in a different Progreſſion.

The ſixth Note *H*, in Lieu of the Second, when this laſt governs the Fifth of the Key, that Fifth being alſo repreſented by its ſharp Third, which is the Leading-note, or ſharp Seventh *G*.

The Chord of Six and Four is oftentimes more proper to the Fifth, than the Perfect, in a diatonick Progreſſion, and eſpecially when it happens on the unaccented Part of the Bar.

Theſe different Progreſſions of a Baſs, together with thoſe we have hitherto mentioned, include all the Progreſſions of a Baſs that can be practiſed in the moſt natural Harmony; for, as to ſome other Diſcords that we have not as yet taken Notice of, their Progreſſions are ſo limited that there can be no Difficulty in knowing the Uſe of them, as ſoon as what we have hitherto mentioned be thoroughly underſtood.

CHAP. XVIII.

Of the Manner of preparing all Diſcords.

WHEN we explained the Manner of preparing and reſolving the Seventh, we intended at the ſame Time to extend it to all Diſcords, ſince they all proceed therefrom.

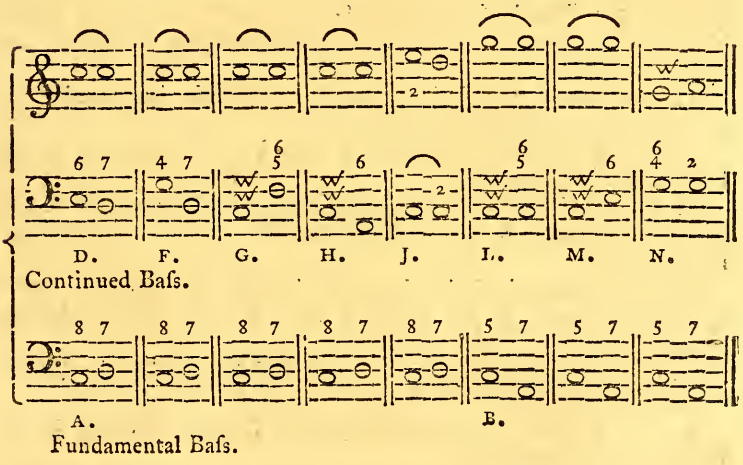
It is true that as we have diſtinguiſhed them into Major and Minor, it is but the minor Diſcords that are to follow intirely the Rule of the Seventh; for the major Diſcords are derived from the Leading-note, or ſharp Seventh, which nevertheleſs makes a Part of the Chord of the Seventh. Now, if the Leading-note is not to be prepared, we muſt from thence conclude, that

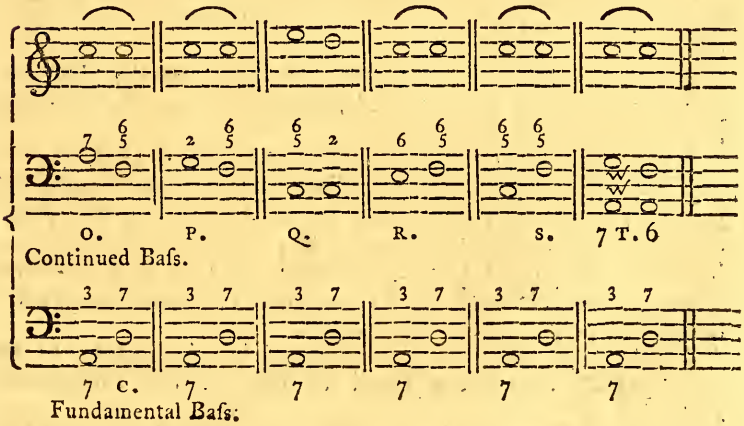
that all major Diſcords do not require it; but, if the Seventh is to be prepared by any one of the Conſonants, ſo muſt all minor Diſcords be; and, provided we do not go out of the Key, we may eaſily cauſe a Diſcord to be heard, by repeating one of the conſonant Notes in the preceding Chord; the like may be done by removing from one Key into another, when you are acquainted with the Manner of doing it ſo as to create an agreeable Continuance of Harmony. We have already mentioned, that one Note may ſerve in different Diſcords following, when the Chords wherein it is uſed are in the Main but one and the ſame Chord, and that the Eleventh might be prepared by the Seventh or by the falſe Fifth, although they be Diſcords; it muſt therefore be eaſily comprehended, that the ſame Note that made the Diſcord, may cauſe another in a Chord which in ſome Shape will appear to be different, provided that, in this Caſe, you do not go out of the Key.

When we mention that the Seventh could not be prepared but by the Third, the Fifth, and the Octave, it muſt be underſtood only when the fundamental Baſs follows its moſt natural Progreſſion, which is to deſcend a Third, a Fifth, or a Seventh; taking Notice, that to aſcend a Second, or deſcend a Seventh, is the ſame Thing; ſo of the other Intervals that bear a like Relation; and that from thoſe Intervals that bear a like Relation, the Leaſt ought to be generally choſen for the Progreſſion of the Baſs, as being more proper and better to aſcend a Second, than to deſcend a Seventh, *&c.* But, if you keep to the inverted Chords (as you may introduce in the Baſſes any of the Notes of a fundamental Chord, upon which the ſaid Chord changes its Name, by Means of the different Intervals that the Sounds of which it is compoſed will make, in reſpect to the Note of the Baſs) you will then find, that, inſtead of the Third or the Fifth, the Sixth or the Fourth will prepare the Seventh; in the like Caſe you will find, that the Third, the Fourth, the Fifth, the Sixth, and even the Octave will prepare a falſe Fifth, by reaſon that the Chord of the Seventh is repreſented by, and included in, the Chord of the falſe Fifth, as well as in all other diſſonant Chords; ſo that, by whatever conſonant Note a Diſcord is prepared, you can never be miſtaken, provided you endeavour to avoid what is not natural: For Example, if in the Baſs, inſtead of the Key-note, I had a Mind to place its Third, or its Fifth, each bearing a Chord derived from the Perfect to that Key-note; and that I would cauſe a Seventh to be heard, prepared by the Octave, by the Fifth, or by the Third to the Key-note; that Octave will then become a Sixth to the Third, and a Fourth to the Fifth; ſo of the Fifth and of the Third,

Third, by obſerving the ſame Proportion. And, by this Relation, our firſt Rule, as to Sevenths, is general for all minor Diſcords; likewiſe if, after a perfect Chord upon the Key-note, its Third, or its Fifth, inſtead of cauſing a Seventh to be heard (which any one of the conſonant Notes of that perfect Chord may prepare) I had a Mind to hear a falſe Fifth, a Tritonus, a great or ſmall Sixth, *&c.* that would proceed by my having placed in the Baſs one of the Notes belonging to the Chord of the Seventh, in Lieu of the fundamental Note.

E X A M P L E.





1. *A*, the Seventh prepared by the Octave, according to the fundamental Harmony. *D*, the Third upon which the Octave to the fundamental Baſs becomes a Sixth. *F*, the Governing-note upon which the Octave to the fundamental Baſs becomes a Fourth; by this Means the Seventh is found to be prepared by the Octave, the Sixth, and the Fourth.

G, in the Chord of the great Sixth, the Fifth which repreſents the Seventh, is prepared by the Octave; and the Guides that are upon the Third and the Fifth ſhew, that the ſame Fifth may be equally prepared by the Sixth, and by the Fourth of thoſe two Notes; ſo of the other Places where there are Guides.

H, in the Chord of the ſmall Sixth, the Third which repreſents the Seventh, is prepared by the Octave, by the Sixth, and by the Fourth.

I, the Second, which is prepared in the Baſs, is preceded by its Third in the upper Part.

2. *B*, the Seventh prepared by the Fifth, according to the fundamental Harmony.

L, In the Chord of the great Sixth, the Fifth which repreſents the Seventh, is prepared by the Fifth, by the Third, and by the Octave.

M, in the Chord of the ſmall Sixth, the Third which repreſents the Seventh, is prepared by the Fifth, by the Third, and by the Octave.

N, The Second prepared by the Octave, or by the Fourth marked by a Guide.

3. *C*, the Seventh prepared by the Third according to the fundamental Harmony.

O, In the Chord of the great Sixth, the Fifth is prepared by the Third to the fundamental Note to which the Seventh is added.

P, that ſame Fifth prepared by the Fourth to the Note that makes the Seventh to the fundamental Baſs, which Note muſt bear the Chord of the Second.

Q, the Second prepared in the ſame Manner as at *I*.

R, that ſame Fifth prepared by the Sixth to the Note which governs that in the fundamental Baſs. Obſerve in this Place, that all Notes that govern another may be repreſented, by bearing a Chord inverted from the Perfect, or that of the Seventh which the other ſhould carry; and that this Chord inverted is that of Six, Four, or the ſmall Sixth.

S, that ſame Fifth, is here prepared by the Octave to the Note, which makes the Third to that in the fundamental Baſs.

T, In the Chord of the ſmall Sixth, the Third is prepared by the Third, by the Sixth, or by the Octave; and the Seventh that

that precedes is reſolved by the Sixth, to the ſame Note on which that ſame Seventh hath been heard

We have not hitherto taken Notice of the Second, but, before we ſay any Thing concerning it, obſerve, that it ſhould be prepared but in the preceding Manner.

It hath been ſufficiently ſhewn, that all the ſeveral and different Ways of preparing Diſcords proceed from that of preparing the Seventh; and that the only Difficulty conſiſts, how to know, by the Baſs, the Notes that compoſe the Chord to that which is the Fundamental. In order thereto, you muſt obſerve, that the firſt diſſonant Chord muſt be preceded by a conſonant Chord; and that this conſonant Chord can be but the Perfect to the Key-note, its Fifth, or its Fourth; which perfect Chord may be repreſented by that of the Sixth, upon the Third of each of thoſe Notes, and by that of Six and Four upon the Governing-note of the Key only.

In Compoſition of two or three Parts only, we often chuſe but the conſonant Notes in a diſſonant Chord, ſo that, if we do not know the Key we are in, and have not a particular Regard to the Progreſſion of the Baſs, all our Rules will be uſeleſs; therefore you cannot too cloſely apply yourſelf to underſtand perfectly theſe Rules, which we have given in the Key of *C*, and are ſufficient for all other Keys.

As we ought not to begin a piece of muſic but by a conſonant Chord, we cannot of Courſe uſe a Diſcord, but after a conſonant Chord; but oftentimes, after a Diſcord there follows another; for as we have already ſaid, that a conſonant Chord cannot appear after a Diſcord, unleſs the Leading-note, or ſharp Seventh, be uſed in this laſt Chord, otherwiſe you paſs on from one Diſcord to another, as appears by our Rules of the Seventh; and as this is a little difficult to diſcover in Pieces of two or three Parts, becauſe that theſe diſſonant Chords take in at leaſt two conſonant Notes, which are the Third and Fifth, and, in an inverted Manner, the Sixth and Fourth, without mentioning the Octave that may be found therein; ſo that one may often paſs from a diſſonant Chord to another, without knowing it: Therefore you muſt endeavour to underſtand theſe firſt Principles, if you intend with Certainty to know what you are about.

CHAP. XIX.

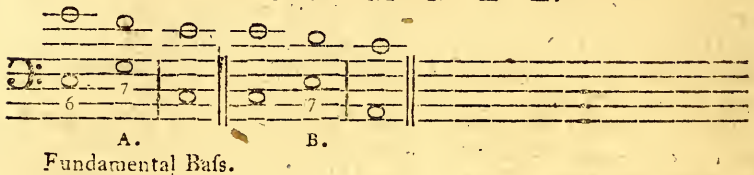
Shews where Diſcords *cannot be prepared.*

IF, inſtead of making the fundamental Baſs to deſcend a Third, a Fifth, and a Seventh, we make it aſcend in the

ſame Manner, we ſhall find that the Seventh cannot be prepared; yet in thoſe Progreſſions we find ſomething that obliges us to cauſe that Seventh to be heard, as the Octave in a diatonic Progreſſion, in Chap. XI. proves it, when we proceed from the Key-note to its Fifth; and that this laſt retrogrades or deſcends to the Key-note, the Ear is not in the leaſt ſhocked thereby, according to the Opinion of all Maſters.

If the Baſs aſcends a Third, in order to deſcend a Fifth immediately afterwards, the Seventh which is heard upon the Note ſo aſcending, cannot likewiſe be prepared.

E X A M P L E.

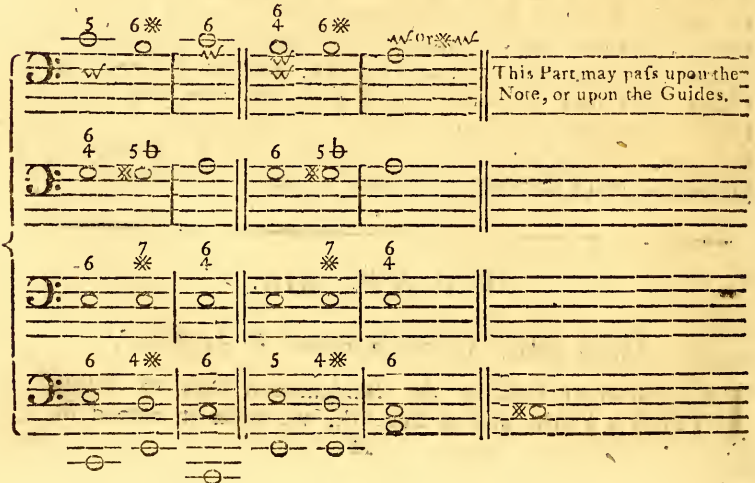


Fundamental Baſs.

The Example *A* ſhews a Progreſſion of a Fifth aſcending, ſince it begins by the Third, which repreſents the Key-note. But the Example *B* proves that the Seventh cannot be prepared when the fundamental Baſs aſcends a Third, ſince the Note that makes the Seventh to the ſecond Note of the Baſs, cannot make a conſonant Note with the Firſt.

One might give a ſharp Third to the ſecond Note at *B*, in which Caſe the Key would then be changed: And this is often practiſed, eſpecially in an inverted Harmony; as may be ſeen in the following Example.

E X A M P L E.



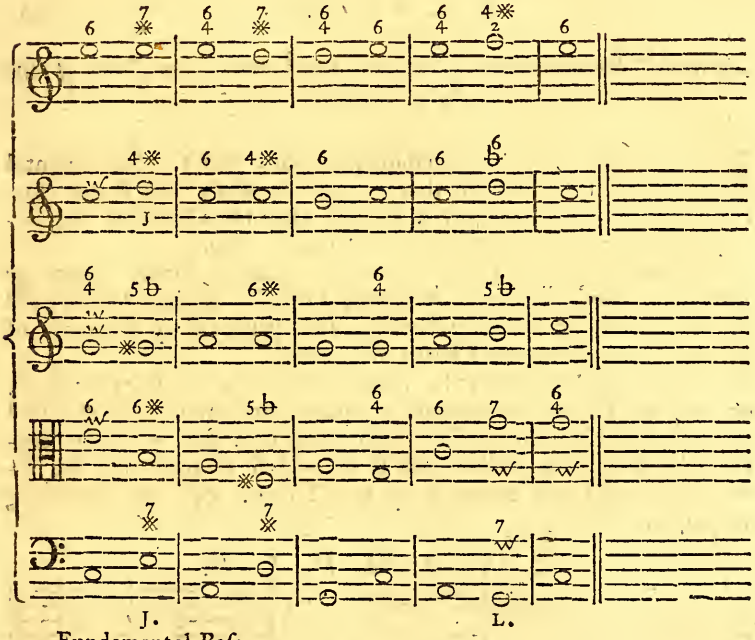
Fundamental Baſs.

Each

Each Part may ſerve reciprocally as an upper Part or a Baſs; and you may ſee how the falſe Fifth, the Tritonus, and the Seventh may not be prepared.

If the Baſs aſcends a Seventh, the Diſcord cannot be prepared.

E X A M P L E.



Fundamental Baſs.

The Seventh unprepared at *J*, when the Fundamental Baſs aſcends a Third; and at *L*, when it aſcends a Seventh or deſcends a Second.

N. B. It is but after a conſonant Chord that a Diſcord may be taken unprepared, for after a diſſonant Chord the Diſcord muſt abſolutely be prepared, according to our Rules.

We muſt obſerve, that we do not intend to include the ſharp Seventh or Leading-note, in the different Diſcords prepared or unprepared; by reaſon that we here ſpeak but of minor Diſcords, and theſe Rules do not concern major Diſcords which proceed from the ſharp Seventh, in Favour of which a Minor Diſcord is often heard unprepared, as in a Progreſſion of the fundamental Baſs aſcending a Third or a Fifth, in order to deſcend afterwards a Fifth, wherein the perfect Cadence, which is formed by

by this laſt Progreſſion in deſcending, cannot take Place, unleſs the ſharp Seventh be heard in the Chord to the firſt Note that deſcends a Fifth; ſo that from thence one may draw very uſeful Inferences, but we ſhall not ſpeak of them, until we have explained the Manner of removing from one Key into another.

CHAP. XX.

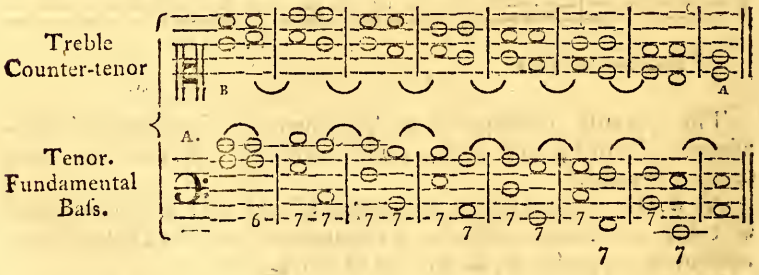
An exact Enumeration of all the different Progreſſions of the Baſs, *according to the different* Diſcords *therein uſed.*

IT is always from our fundamental Baſs, and the fundamental Chord of the Seventh, that we are to draw the Rules concerning Diſcords; and we ſhall ſhew that the Chord of the Seventh only is predominant in all diſſonant Chords.

We do not in this Place intend to enlarge further upon our firſt Rule concerning the Seventh, only by giving that Chord to every Note in a Key, when the Baſs proceeds by Intervals of a Fourth aſcending, or a Fifth deſcending.

The firſt Seventh may be prepared by any of the Concords, or may be taken unprepared, according to what we have ſaid upon that Subject in the foregoing Chapters: But we ſhall hereafter be obliged to follow the Rule which requires it to be always prepared and reſolved by the Third: See the following Example.

E X A M P L E.



Obſerve, that all the Parts move by deſcending, and that theſe Sevenths are alternately accompanied by the Third and Fifth, or by the Third and Eighth, thus, 1, 3, 5, 7, or 1, 3, 7, 8.

In order to render this Harmony more complete, there ought to be five Parts, as we ſhall preſently ſhew.

You will find ſome of theſe Sevenths not in their natural Proportion, as thoſe of *C* and *F*, which we had expreſſly forbidden by

by our firſt Rules; but that is to be overlooked in the like Succeſſion or Sequence of Diſcords, as they are cauſed by the Modulation, where it is not permitted to add any Sharp or Flat to any of the Notes. You will alſo find, in what follows, other falſe Intervals which proceed from theſe; ſo that, as it happens by Accident that they are ſuch, they muſt be written as if they were right, by reaſon that we cannot help cauſing thoſe Notes to intervene in Harmony, when we do not chuſe to go wide from the Key.

If we take for Baſs that Part which makes the Tenor at *A*, we ſhall find that the firſt Note that anſwers to that on which the firſt Seventh is figured, will bear the Chord of the ſmall Sixth; and, by the following Note which bears the Chord of the Seventh, a new Progreſſion of the Baſs may be formed by new Chords in Appearance, as will be ſhewn by the following Example, where that Part will be likewiſe marked by the ſame Letter *A*.

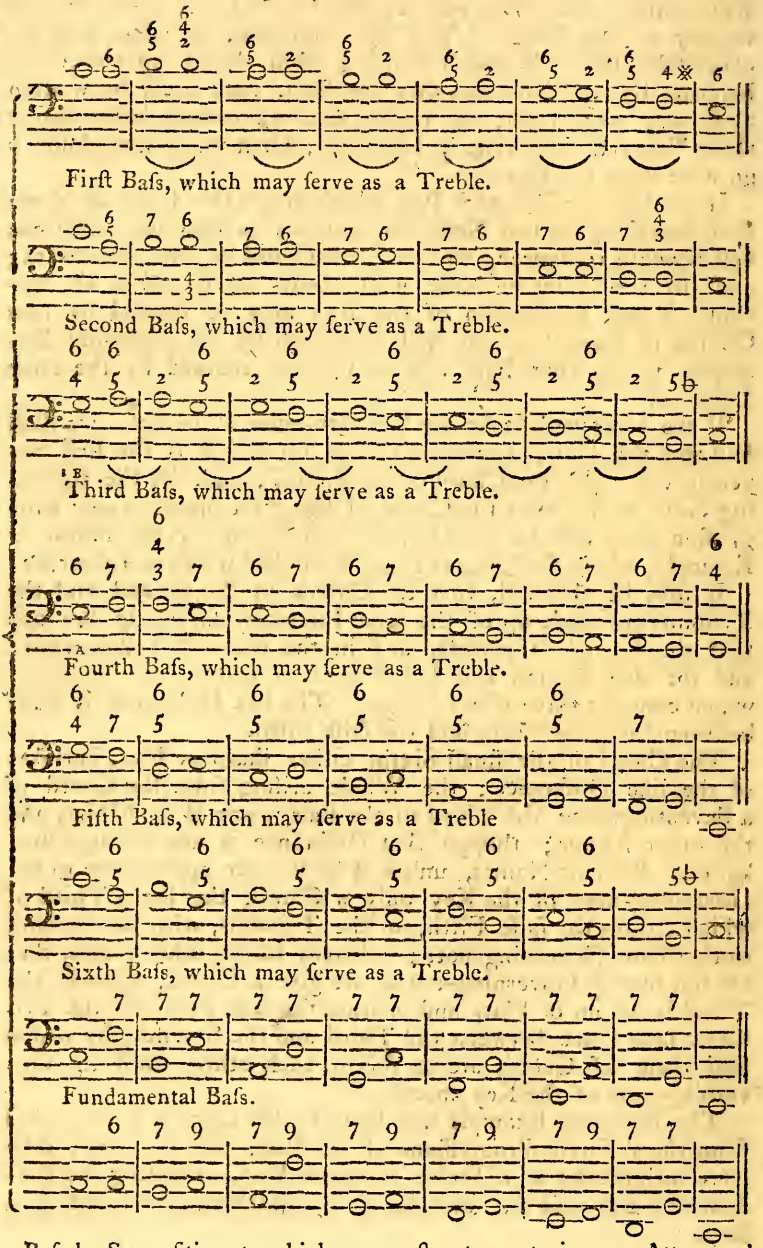
If we afterwards take the Counter-tenor *B* for Baſs, we ſhall find that the Note, anſwering to that on which is the firſt Seventh, will carry the Chord of the Second; and, by the following Note which bears the Chord of the great Sixth, a new Progreſſion may alſo be formed; as will appear by the following Example, where that Part is likewiſe marked with the Letter *B*.

It may be obſerved, that the Chords of the Second and the Tritonus are made up of the ſame Intervals, ſaving in the one that the Fourth is perfect, and in the other it is ſharpened; and for that Reaſon this laſt Chord is called the Tritonus, which contains three whole Tones. The like Difference is made between the great Sixth and the falſe Fifth.

The Chord of the ſmall Sixth, either Sharp or Flat, partakes of the like Difference; the Whole ariſing from the Chord of a Seventh, where the Third to the Baſs is one Way Major, and the other Minor; though that Difference is not diſtinguiſhed by two different Names, unleſs it be that we appropriate to the Governing-note of the Key only a Chord, the ſharp Third of which creates the falſe Fifth, or the Tritonus, with the Seventh to that ſame Governing-note; whereas to the other Notes, that are but merely Governing-notes, we give a Chord, wherein the Third is Minor or Flat, and neither the falſe Fifth nor the Tritonus take Place between the Third and the Seventh, by reaſon that theſe laſt Chords are to follow each other, until the Governing-note of the Key appears.

The following Example will ſhew all the Chords that proceed from the different Progreſſions of the Baſs, and each Part may ſerve reciprocally as a Treble or upper Part, excepting the fundamental Baſs and that underneath it, which can ſerve but as a Baſs.

E X A M P L E.



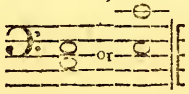
Baſs by Suppoſition, to which one muſt not as yet give any Attention

1. Obſerve that the Progreſſion of the four firſt Baſſes is the moſt natural, in reſpect to the Fundamental; and that the Progreſſion of the fifth and ſixth Baſſes are borrowed from thoſe firſt Baſſes.

The Progreſſion of the fifth Baſs is taken from the Firſt and Fourth.

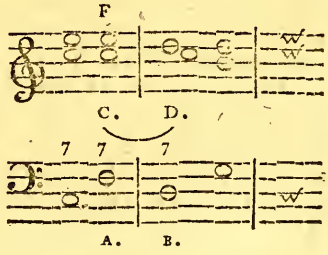
The Progreſſion of the ſixth Baſs is taken from the Second and Third, and, if we have not figured with a 7 all the Notes in the fifth and ſixth Baſſes, that might carry the Chord of the Seventh, it is to be underſtood, that the perfect Chord can only be taken, without the Seventh, by leaving out the Octave in the Chord to thoſe Notes that precede them, by reaſon it is that Octave that prepares the Seventh.

2. In the natural Progreſſion of the Four firſt Baſſes, it is obſervable that the Firſt and Second, and the Third and Fourth, are diſpoſed by Thirds, and, whilſt the two laſt deſcend, the two firſt remain upon the ſame Degree, and ſo on alternatively unto the End; for, as it is more agreeable to the minor Third to deſcend, we cannot help giving that Progreſſion at leaſt to thoſe Parts which make it; and, in a like Continuance of Harmony, the conſonant Note which is a Third below, muſt follow that Progreſſion, remembering that a Sixth above, or a Third below,

is the ſame Thing as *C E*, or *E C*, 

It is true that the conſonant Note is limited in this Place, only by reaſon of the fundamental Baſs; for a conſonant Note may remain upon the ſame Degree, in order to create a Diſcord, if the Baſs proceeds thus:

A, *B*, the Baſs, deſcends a Third, inſtead of a Fifth; and then the conſonant Note at *C*, which happens to be a Third below the Diſcord at *F*, remains upon the ſame Degree, in order to create the Diſcord at *D*.



In order to hear the Effect of all theſe Parts together, the fifth and the ſixth Baſs muſt be left out.

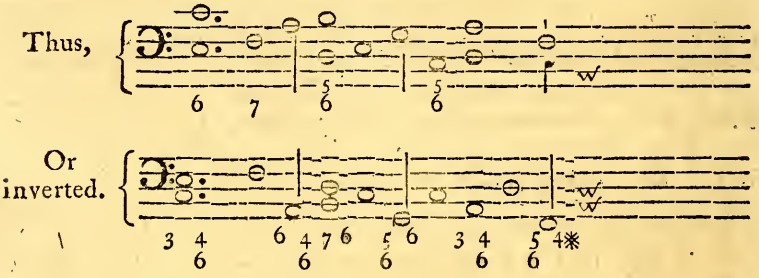
4. If the four firſt Baſſes only are taken apart, you will find that the three upper Parts contain all the Sounds, of which the Chords figured upon the Fourth are compoſed; likewiſe, if any one of the other Parts is choſen for a Baſs, by tranſpoſing it an

Octave

Octave lower, ſo that it be below the other Parts, or by tranſpoſing theſe an Octave higher, the Chords figured upon any one of thoſe Baſſes will be found to be in the other Parts. If the fifth Baſs is choſen, you muſt place over it only the Second, the Third, and the Fourth, becauſe the firſt bears too great an Affinity to it: and, if the Sixth be choſen for a Baſs, then the Firſt, the Second, and the Fourth only are to be placed over it, by altering only one Note, which in the firſt Bar creates two Octaves together.

Thus in one ſingle Example we are inſtructed in the different Conſtruction of all diſſonant Chords, of the Progreſſion of Diſcords, and of the Difference of thoſe Chords, in reſpect to the different Progreſſion of the Baſs, the Whole conſiſting by inverting the Chords, or in an Harmony inverted.

5. The fifth and the ſixth Baſſes have a good Effect, being taken ſeparately, and one may even make them ſyncope.



It is pretty difficult to add two other Parts to theſe, by reaſon that an Harmony inverted introduceth a certain Suppoſition, which requires a vaſt Knowledge in Harmony; ſo that one muſt not at preſent practiſe them, but as they are pricked, that is to ſay, in two Parts only.

When any one of the Parts is choſen for a Baſs, it ought to begin and end by the Key-note, and be ſo contrived, that the Key-note at the End be preceded by its Fifth; which may be eaſily done by altering the other Parts ſuitable to their Progreſſion, when they are to be heard above the fundamental Baſs.

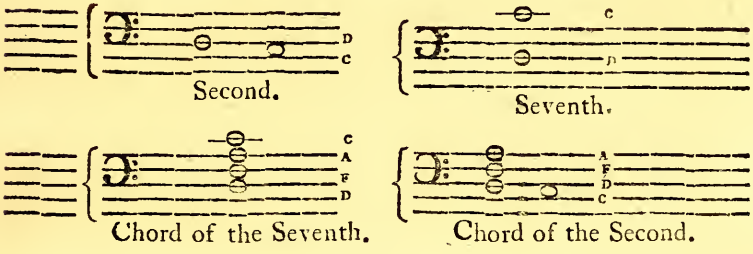
CHAP.

CHAP. XXI.

Of the Chord *of the Second.*

THE Second is an Interval inverted from that of the Seventh, and conſequently the Chord of the Second is inverted from the Chord of the Seventh.

EXAMPLE.



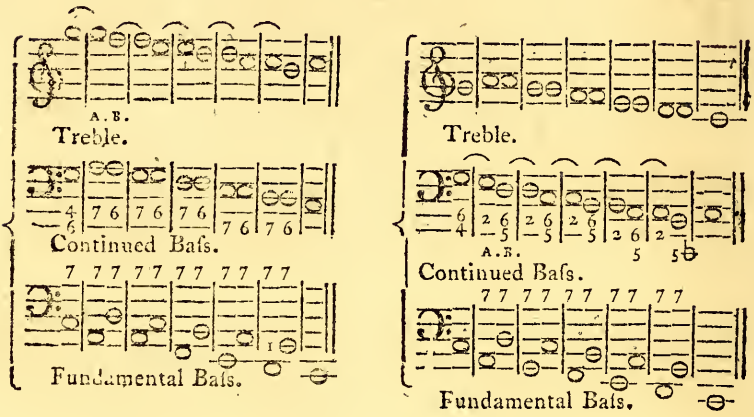
This Inverſion cauſes another of the ſame Nature, when it is neceſſary to prepare and reſolve theſe Diſcords.

If all minor Diſcords are to be prepared and reſolved in the Treble, or upper Part, the Second on the contrary, which cauſes the minor Diſcord to be heard in the Baſs, is to be prepared and reſolved by that ſame Baſs, according to the Progreſſion fixed to a minor Diſcord; ſo that you muſt cauſe to be heard in the ſecond, or laſt Part of the Bar in the Baſs, that Note on which you are willing to make a Second upon the firſt Note, or Part of the next ſubſequent Bar, and this Note muſt afterwards deſcend; ſo that, whilſt you make a Baſs to proceed in that Manner, you may give to each Note a Chord like thoſe in the following Example, until the major Diſcord appears, after which follows a conſonant Chord.

One muſt alſo take Notice, that in a Progreſſion, or Succeſſion of Harmony, like unto that in the Example, a major Diſcord may appear, when the Air or Melody of the Baſs proceeds by the ſame Degrees, paſſing through the Third, without cauſing a Concluſion which is reſerved for the Key-note, or one of its Derivatives, which appears but in one more Bar afterwards, as may be ſeen in the following Example. The major Diſcord, which in that Caſe doth not follow its natural Progreſſion, is, for that Inſtant, deemed a minor Diſcord, which is allowed only in reſpect to the Modulation, when we are minded to ſuſpend the Concluſion for ſome Bars; though it will always be better to

conclude upon the perfect Chord to the Key-note, or upon that of the Sixth to the Third, after the ſharp Seventh, or Leading-note.

E X A M P L E S.



By theſe Examples it is evident, that the Second is prepared and reſolved in the Baſs, in the ſame Manner as the Seventh is prepared and reſolved in the Treble *A*, *B*, and that the Chords in one and the other are made up of the ſame Sounds, as appears by the fundamental Baſs.

In order to know at preſent the Choice that ought to be made of the Chords in either of the Examples, where the Baſs proceeds almoſt equally alike, ſince it deſcends diatonically each Way, and cauſes the ſame Note to be heard twice on the ſame Degree, it muſt be obſerved, that on one Side thoſe two Notes are contained within the ſame Bar, and that on the other Side, they are divided by the Bar; ſo that, when your Baſs is like unto one of theſe, you may always uſe the like Chords, and be certain that you will not then commit any Fault by following this Rule.

If in the Example in the preceding Chapter there be ſome Baſſes, whoſe Progreſſion is not agreeable to theſe, in reſpect to the Chords they bear, it is becauſe they repreſent only Trebles; but otherwiſe do not go from the Rule, if you intend to compoſe rightly and regularly.

The Second abſolutely requires to be prepared by the Third, though it may be prepared in the Treble by all the Concords, or conſonant Notes, and the Baſs muſt always ſyncope in that Caſe.

Obſerve

Obſerve at preſent, that it is by the different Progreſſion of the Baſs that Diſcords are found to be prepared and reſolved by all the Concords; and, in order that you may not be miſtaken therein, always add a fundamental Baſs under your Compoſition, and you will thereby ſee, that the minor Diſcord which makes the Seventh to that Baſs is never prepared but by the Octave, the Fifth, or the Third, and that it is never reſolved but by the Third, otherwiſe your Compoſition will never be juſt or regular.

We again repeat that the firſt Diſcord preceded by a conſonant Chord may be prepared by the Octave, the Fifth, or the Third to the fundamental Baſs; and that it is at the ſame Time neceſſary, that thoſe that ſucceſſively follow the firſt Seventh be prepared by the Third to that Note, rather than by any other Concord, by reaſon that the Sequence of Harmony that proceeds from it is the moſt natural:—Yet, for Variety-ſake, we are ſometimes obliged to prepare the Seventh by the Fifth, or by the Octave to the fundamental Note, though this Seventh be found in the Middle, or after ſeveral others: but this is done only, in order to vary or diverſify the Melody or Harmony, ſo that you muſt practiſe it but ſeldom, and with Judgment: And what is hereby ſaid of the Seventh equally comprehends all other minor Diſcords, by reducing it to its fundamental Note, wherein the Seventh always preſides.

If the Seventh is never to be reſolved but by the Third to the fundamental Note, it is not underſtood but that it may alſo be reſolved by the Fifth, and even by the Octave; but theſe are Licences which you muſt not practiſe until you are Maſter of the reſt, ſo that we ſhall not as yet ſpeak of it.

CHAP XXII.

Of Keys *and* Modes *in general.*

IF what we have ſaid touching Keys and Modes at Chap. VIII. be perfectly underſtood, there remains but what follows.

ARTICLE I.

Of ſharp Keys.

AS you may take whatever Note you think proper for a Key-note, provided you give a Progreſſion to its Octave,

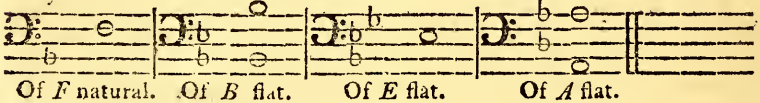
like unto that of *C*, if the Key be ſharp; then Sharps and Flats are to be uſed, in order to increaſe or leſſen, a Semitone, thoſe Intervals that might leſſon that Conformity; the Queſtion is only to know the Number of Sharps or Flats that are generally placed after the Cliff, in order to ſhew that all Notes on the ſame Degree, or Space, with theſe Sharps or Flats, are to be increaſed or leſſened a Semitone; for Example, if we take *D* for a Key-note, and would make its Key agreeable to that of *C*, we obſerve that *F* makes the flat Third to *D*, which is not conformable to the Third of *C*, which is ſharp; therefore we muſt add a Sharp to *F*, to make it a ſharp Third to *D*, as *E* is a ſharp Third to *C*, &c. So likewiſe the Fourth to *F* is *B* flattened; therefore a Flat muſt be added to the Note *B*, when you are in the Key of *F*, to conform it to the Key of *C*.

Example of all ſharp Keys, *whoſe Modulation of an* Octave *is agreeable to that of the* Octave *of* C.

By Sharps.

Key of *G*, of *D*, of *A*, of *E*, of *B*, of *F* ſharp, of *C* ſharp.

By Flats.



Of *F* natural. Of *B* flat. Of *E* flat. Of *A* flat.

Here are eleven ſharp Keys, which, with that of *C*, make twelve, there being but twelve chromatic Notes in an Octave.

As to the Order and Poſition of Sharps, they are declined thus, *F*, *C*, *G*, *D*, *A*, *E*, *B*, &c. which ſhews that, when there is but one Sharp, it can be but that of *F*; if there are two Sharps, they are thoſe of *F* and *C*; if three, then *F*, *C*, and *G*, &c. reckoning always by Fifths, aſcending, from the firſt Sharp which is *F*, to the laſt.

In order to know how many Sharps there muſt be for denoting any one particular Key, you muſt obſerve that it is always the Leading-note, or ſharp Seventh, that determines the Number, becauſe the laſt Sharp is always placed upon it; ſo that the Key of *D* ſharp requires two Sharps prefixed to the Key, by reaſon that, *C* ſharp being the Leading-note, or ſharp Seventh, we cannot put a Sharp to *C*, without placing another to *F*, which is always the firſt Sharp: for the ſame Reaſon, the Key of *E* ſharp requires four Sharps, ſince *D* ſharp is the Leading-note, or ſharp Seventh; ſo of the others.

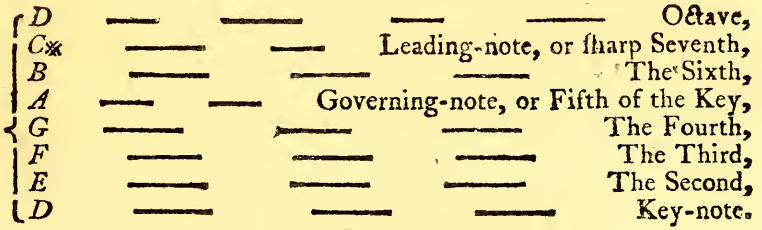
The Order and Poſition of Flats are declined by Fourths aſcending, beginning by that of *B*, thus, *B*, *E*, *A*, *D*, *G*, &c. it is the fourth Note that determines the Number in ſharp Keys; for Example, the Fourth to *F* is *B* flattened, therefore we muſt place a Flat upon the Line of *B*, in the ſharp Key of *F*, and ſo of the other Keys, obſerving that ſharp Keys that require Flats, begin by that of *F*; ſo that reckoning by Fourths, as we reckon by Fifths for Sharps, you will find the Number of Flats required.

ARTICLE II.

Of flat Keys.

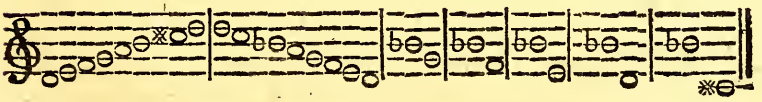
The Octave to *D* will ſerve as an Example for all flat Keys.

EXAMPLE.



The Progreſſion of a flat Key differs from a ſharp Key in aſcending, but in the Third, which one Way is flat and the other ſharp; but in deſcending we muſt make *B* flat, and leave out the Sharp to *C*.

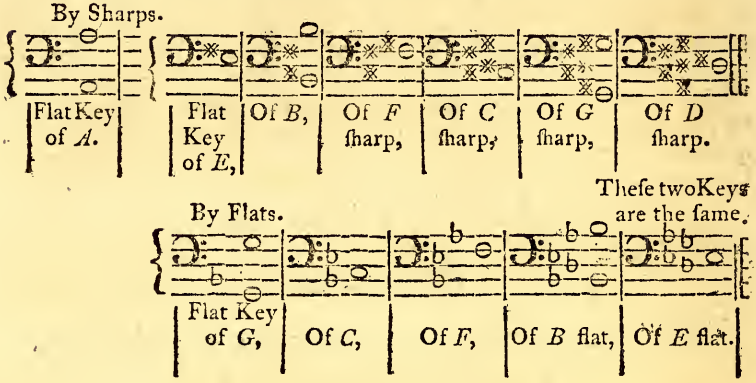
EXAMPLE.



You can never be miſtaken by following theſe Progreſſions in all flat Keys.

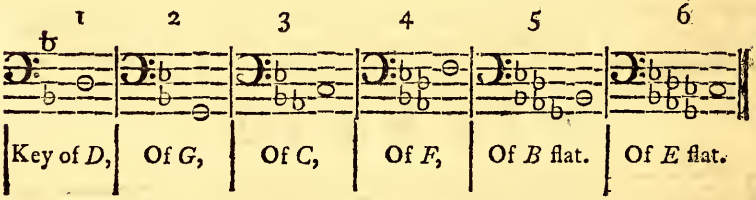
Example

Example of all flat Keys, *whoſe Modulation of an* Octave *anſwers to the above* Octave *of* D.



The Author in the Example of flat Keys by Flats, hath followed the ancient Manner, by omitting the flat Sixth after the Cliff, and, in that Caſe the Key of *D* is not diſtinguiſhed from the Key of *A*; but, according to our Author, the Sixth in flat Keys muſt be deemed flat and muſt be of the ſame Species as the Third. We here give another Example of flat Keys by Flats, beginning by the Key of *D*, which, in this Caſe, bears the firſt Flat

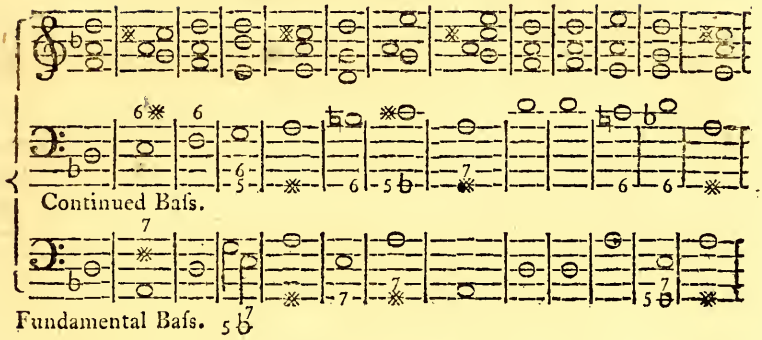
E X A M P L E.

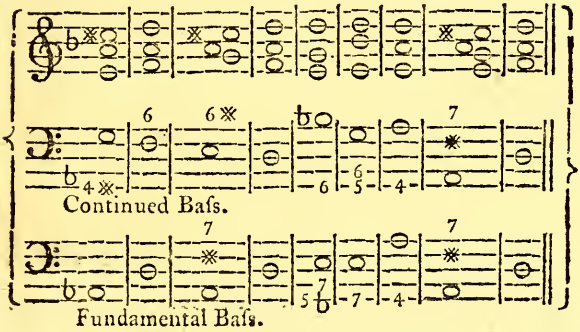


As Beginners may be under ſome Difficulty in reſpect to the Chords in the Modulation of an Octave in flat Keys, here follows an Example of the Chords in the flat Key of *D*.

E X A M-

EXAMPLE.





The Chords in the Treble are to be examined but with the continued Baſs.

Here are likewiſe twelve flat Keys, including that of *D*, which, with that of *A*, is marked without a Flat or Sharp.

The firſt Key that bears a Sharp before the Cliff, is that of *E*, and, in order to know the Number of Sharps proper to each flat Key, you muſt reckon by Fifths, beginning at *E* thus, 1, 2, 3, 4 Sharps.

E, *B*, *F*𝄪, *C*𝄪, &c. conſequently the flat Key of *B*, which is the Second, muſt have two Sharps; ſo of the other Keys; it is alſo the ſecond Note of the Key that denotes the Quantity, it being the laſt Sharp.

The firſt flat Key that hath a ♭ Flat before the Cliff, is that of *G*, ſo that reckoning by Fourths, *G*, *C*, *F*, *B*♭, *E*, you will find the Number of Flats proper to each Key; the flat Third, which bears the laſt Flat, alſo denotes the Quantity.

1, 2, 3, 4, 5 Flats.

CHAP.

CHAP. XXIII.

Of Modulation, or the Manner of removing from one Key *into another.*

1. ALL Notes that carry the perfect Chord are deemed Key-notes, therefore one may ſay, that all thoſe Notes, which in our firſt Examples carry perfect Chords, are like ſo many different Key-notes; thoſe Examples will alſo ſerve for what follows; for we cannot naturally remove from a Key-note into another, otherwiſe than by a conſonant Interval, in ſuch a Manner that, after having begun a Piece in a certain Key, you may remove into another that is a Third, a Fourth, a Fifth, or a Sixth above or below, ſo that the firſt Key-note may become a third, a fourth, a fifth, or a ſixth Note to that you remove into, and ſo on from one Key into another.

2. Beſides what we have already ſaid, the Key-note in a ſharp Key may alſo ſometimes become a Seventh, and even a ſecond Note, but never a Leading-note, or a ſharp Seventh; and a Key-note of a flat Key can become but a ſecond Note.

Obſerve in this Place, that the Seventh, we here ſpeak of, is that which is a whole tone below the Octave, and not that which is but a Semitone below, otherwiſe called the Leading-note, or ſharp Seventh.

3. If when in the Middle of a Piece you would remove into the Fifth, or Governing-note of the Key, the Key of that Governing note, or Fifth, muſt be naturally ſharp, though we may ſometimes make it a flat Key, but this with Judgment; and the Key of a Governing-note, or Fifth to a flat Key, muſt be flat.

Theſe Rules may be treſpaſſed upon when you are capable of judging rightly, but you muſt always be very cautious in doing it.

4. By whatever Key you begin, it is proper to modulate in that Key, for three or four Bars at leaſt, being at Liberty to exceed that Number, as far as your Genius and Taſte will permit.

5. It is better to remove into the Fifth of the Key, than into another; and in that Caſe the firſt Key-note will become a Fourth, and this may be done by the Means of the irregular Cadence.

6. As the Ear will be cloyed by often hearing the ſame Key, it is but into the principal Key that it may be allowed to return; but, in reſpect to the other Keys, it is not proper to return into them again, preſently after you have left it; for Inſtance,

Inſtance, ſuppoſing we had begun by the Key of *C*, we may, after having removed into another, return into it back again; but it would not be proper to return into another Key, after having quitted it, to retake afterwards that of *C*, or to retake another; therefore it will be better to remove into a new Key, and thus from one Key into another with Diſcretion, by returning inſenſibly, as it were, into thoſe that are the neareſt to the principal Key, in order to conclude therein, in ſuch a Manner that it may ſeem as if one had not quitted it; and for that Reaſon, when you have removed into ſeveral Keys, you muſt modulate towards the End in this principal Key, for ſome Time longer than at the Beginning.

7. In ſharp Keys it is better to remove into the Sixth, than into the Third; whereas in flat Keys it is better to remove into the Third, than into the Sixth.

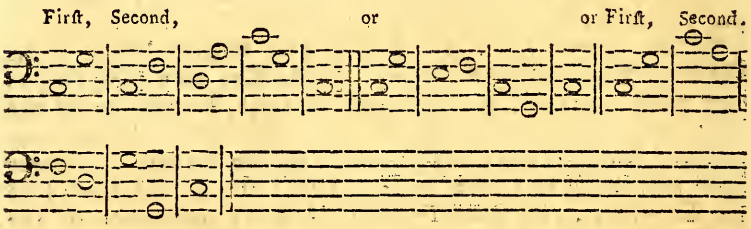
8. In order to know if the Key you remove into is to be Sharp or Flat, you muſt obſerve that the Key-note that follows that which you quit, its Third and its Fifth, be made up of the ſame Notes contained in the Octave to that which immediately preceded it, and even alſo (provided that the Length of a Piece doth not oblige us to the contrary) that the perfect Chord to the Key-notes, that may be uſed in the Continuance of the Piece, be made up of the Notes contained within the Octave of the firſt and principal Key, without altering thoſe Notes by any new Sharp or Flat; for Example, If I begin by the Key of *C*, it is plain that the Notes *E*, *F*, *G*, *A*, and ſometimes *D*, their Thirds and Fifths, are made up of the ſame Notes that belong to the Modulation of the Key of *C*, ſo that we may remove indifferently from a ſharp to a flat Key, and from a flat into a ſharp Key, according as the Thirds happen to be conformable to the diatonic Order of the firſt original Key, or at leaſt to the laſt you quit. If, after the ſharp Key of *C*, we remove into that of *A*, this laſt will be flat, by reaſon that the Note *C* makes the flat Third to *A*; ſo of the others. In order to follow this Modulation in flat Keys, you muſt obſerve the Modulation of their Octaves only in deſcending, where the Leading-note, or ſharp Seventh, quits its Sharp and becomes natural; it is for that Reaſon one may do the like in ſharp Keys, by adding a Flat to the Leading-note, or ſharp Seventh; for, when we have ſaid the Key-note might become a Second, it is but where there always ſhould be an Interval of a whole Tone between the Key-note and its Second, having already taken Notice of this Modulation in the ſecond Article.

9. You muſt contrive to remove as it were inſenſibly from one Key into another, and in ſuch a Manner that the Ear may

hardly perceive it, which may be done by following the above Method.

10. The laſt Note of the Key you quit, muſt always bear a conſonant Chord, ſo that this laſt Note will be either the Key-note, its Third, or its Governing-note, or Fifth, or ſometimes the Sixth, which may carry the Chord of the Sixth; though you muſt at firſt only ſtick to remove from a Key-note to its Fifth, and, that Fifth becoming a Key-note, you may afterwards follow the Method preſcribed in the following Example, by modulating for ſome Bars, in the Key to each of thoſe Notes which we make the Baſs to remove.

E X A M P L E.



The Baſs may begin upon the firſt or ſecond Bar, and you ought not to dwell as long upon the ſecond Key, as upon the firſt; and ſtill leſs upon the others, by uſing ſometimes but one, two, three, or four Notes of theſe laſt Keys, in order to remove into the other, which depends more chiefly upon Taſte than on Rules.

CHAP. XXIV.

Some further Rules on the foregoing Chapter.

IT is by the Means of the Cadences, that you may learn to change Keys; theſe Cadences introduce a Sort of a Stop or Reſt, during a Piece, after which you may remove into whatever Key you will, by making another Cadence in this laſt Key; for after a perfect Chord, which is the Concluſion of all Cadences, you are at Liberty to remove to whatever Chord you will.

Sometimes the Key-note may be repeated after a Cadence, by giving to that Note repeated a Chord proper and ſuitable to the Key you remove into.

By

By giving it the Chord of the Seventh, or of Six and Four, it then becomes a Fifth, or a Governing-note *A*.

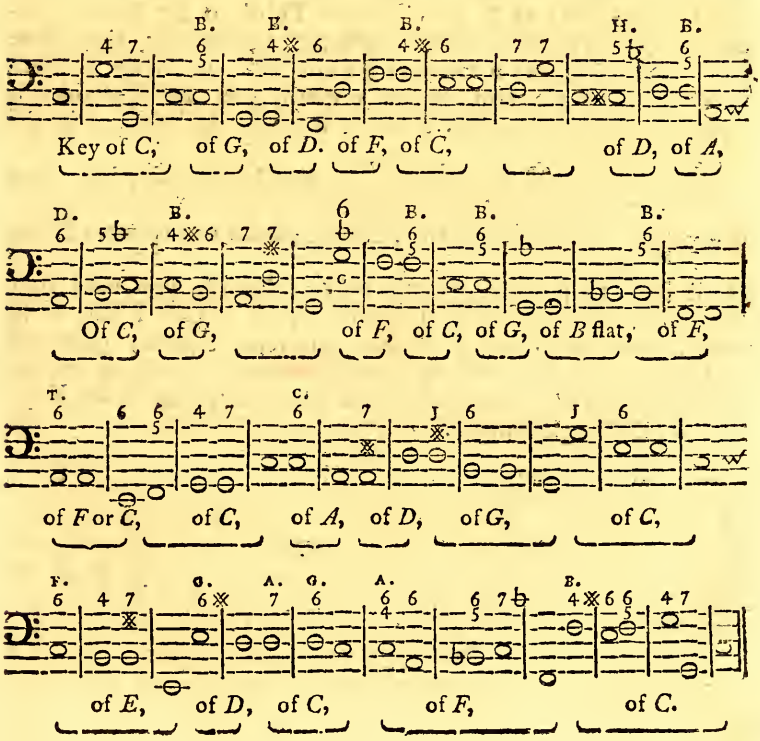
By giving it the Chord of the Tritonus, or the great Sixth, it becomes a fourth Note *B*.

By giving it the Chord of the Sixth, it becomes a Third *C*, or a ſixth Note aſcending to the Leading-note, or ſharp Seventh *D*.

By giving it the Chord of the ſmall Sixth, it becomes a ſixth Note deſcending upon the Governing-note of the Key *F*; and ſometimes you may alſo cauſe the Key-note to aſcend a Semitone inſtead of repeating it, by giving the Chord of the falſe Fifth to the Note ſo aſcended, which then becomes a Leading-note or ſharp Seventh *H*.

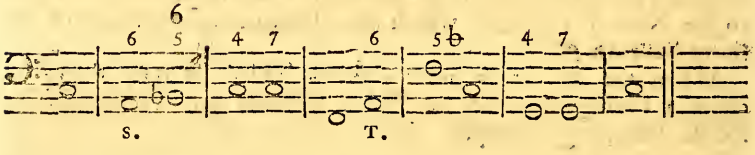
When the Key-note bears a ſharp Third, it may then become a Governing-note, or Fifth, without any Alteration *J*; ſee the following Example.

EXAMPLE.



You may give the perfect Chord only to all thoſe Notes figured thus, $\frac{6}{5}$, and over which is a *B*, by reaſon that the irregular Cadence, which then takes Place, doth not abſolutely require any other Chord; a third Note may become a Sixth, as a ſixth Note may become a Third, as may be partly obſerved in the above Example at the Letter *T*.

E X A M P L E.



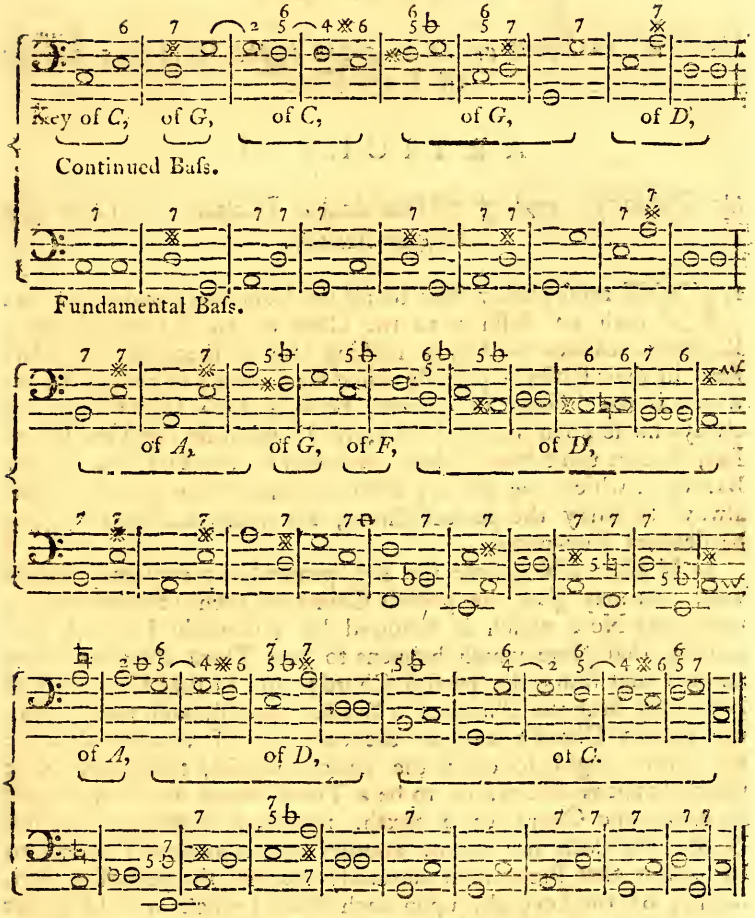
The Note at *S*, which is the Sixth to *C*, becomes the Third of the Key of *F*.

The ſame Note at *T*, which is the Third to the Note *F*, becomes the Sixth to *C*, without altering the Chord; that Note which may be either a third or a ſixth Note, is always between two Notes of the Diſtance of a Fifth, and which divides it into two Thirds, as from *F* to *C*, wherein the Note *A* is the middle Note.

The Key may be alſo changed by the Means of 7ths, 7 and $\frac{6}{5}$, 2, 4♯, —, and 5 ♭; ſo that, having cauſed one or more Notes of the Baſs to paſs through this Sort of Chords, you need only to cauſe an Interval of a Tritonus, or of a falſe Fifth, to be heard, in order to decide the Key you remove into; obſerving that this Tritonus, or falſe Fifth, is to be made up of the ſharp Third, and the Seventh to the Governing-note of the Key; ſee the following Example.

E X A M-

E X A M P L E.



Obſerve that the Diſcord by which you remove into another Key, muſt always be prepared by a conſonant Note in the Chord that ends the laſt Key.

Theſe Examples are ſufficient for inſtructing how to compoſe a Baſs, according to the Chords that are choſen; but we are going to give it another Shape, by allowing the Liberty to compoſe a Baſs at Pleaſure, the Progreſſion of which will teach us what Chords they are to carry.

CHAP.

CHAP. XXV.

Shews what Chords *are to be given to the Notes of a* Baſs *in all Progreſſions.*

ARTICLE I.

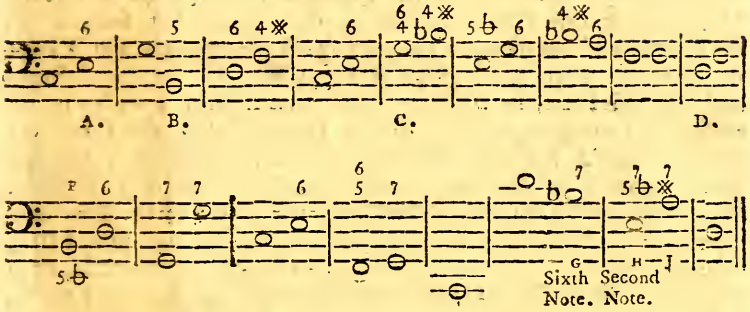
Of Cadences, *and of all that hath a Relation to a Cloſe of a Song or Melody.*

1. ONE muſt cloſely ſtick to all the Cadences, and to all that hath an Affinity to the Cloſe of an Air or Melody; Beginners cannot well help making Uſe of them at every Inſtant in their Baſſes, eſpecially when they intend to change Keys; which is not difficult to obſerve, becauſe thoſe Concluſions are always made upon the firſt Part, or Diviſion of the Meaſure or Bar, ſo that thoſe Notes that are found in the firſt Part of the Bar upon which the Melody ſeems in ſome Shape to reſt, ought always to carry the perfect Chord, for which Reaſon they may be deemed Key-notes.

2. If after a Key-note the Baſs proceeds by conſonant Intervals, you may give the perfect Chord to each of thoſe Notes, until that Note which is followed by a diatonic Interval, excepting that Note which happens to be a Third above or below another that bears the perfect Chord; and in that Caſe the firſt Note may bear the Chord of a Sixth, as well, and rather than the perfect Chord; and on the contrary, if you find that the firſt Note ought to carry the perfect Chord, then that Note which happens afterwards to be a Third above or below, ought to carry the Chord of a Sixth, provided that after the laſt Note there doth not follow another in a conſonant Progreſſion, by reaſon that Progreſſion naturally requires the perfect Chord, or that of the Seventh, upon each Note (which will be better explained hereafter) and that Note, which on the above Occaſion we have ſaid might bear the Chord of a Sixth, is always a Third, or a ſixth Note, though you may give only the perfect Chord to each of thoſe Notes, when you are afraid of being miſtaken.

EXAM-

E X A M P L E.



Being in the Key of *C*, we ſee that the next Note which is a Third above *C*, and below the Governing-note, or Fifth, ought to carry the Chord of the Sixth *A*.

B, the Note which is a Third above the Governing-note, or a Sixth below, which is the ſame Thing, might carry the Chord of the Sixth; but we have already ſhewn, that the Chord of the falſe Fifth is more proper, by reaſon that that Note is the Leading-note, or ſharp Seventh to the Key of *C*, which we have not quitted, and which keeps on until the Note *C*.

We find four Notes together that aſcend by Thirds from the Key-note, the Third to which bears the Chord of the Sixth, and the Governing-note, or Fifth, carries that of Six and Four *C*, rather than the perfect Chord; becauſe the Flat againſt the Note *B* denotes a new Key, which is eaſily diſtinguiſhed in the Progreſſion of the Baſs by the Interval of the falſe Fifth between that ſame Note *B* flat and the Note *E* that follows; therefore the Note *E*, which is the loweſt Sound to the falſe Fifth, becomes a Leading-note, or ſharp Seventh, and conſequently the Chord to the Note *B* flat muſt be ſuitable to the Key which that ſharp Seventh leads, ſince this *B* flat is not comprehended in the Key of *C*, which is then quitted, and the Governing-note to *C* ſuits its Chord to that which ſucceeds it; ſo that, without going out of the Key of *C*, it then carries the Chord of Six and Four, which makes that of the Tritonus to that ſame Note *B* flat; for, if that Governing-note had carried the perfect Chord, the Third muſt then abſolutely have been flattened, in order to avoid a falſe Relation, which falſe Relation conſiſts in never uſing, in two different Parts, two Notes together, the Name of which alters but by a Sharp or Flat's being annexed to it; that is to ſay, that having taken in one Part the Note *B*, which makes the ſharp Third to *G*, we cannot uſe, in another Part, that ſame Note *B*, with a Sharp or Flat; we ſhall hereafter

after treat of it more fully; ſince then we give the Chord of Six and Four to the Note at the Letter *C*, it is in order to ſuit the Harmony of this Chord to that of the Chord that follows it; for we might have given it the perfect Chord with the flat Third, or we might even have given it the Chord of the ſmall Sixth and the falſe Fifth to the Note that immediately precedes it, by reaſon that there happens to be an Interval of a falſe Fifth between *E* and *B* flat that follows; ſo that, whenever a like Interval appears in the Baſs, the Key is then abſolutely decided, the Sound grave to this falſe Fifth being always the Leading-note; and what we here ſpeak of concerning the falſe Fifth, equally regards the Tritonus, the acute Sound of which is then a Leading-note. Yet if the baſs proceeded by aſcending a Fourth, or deſcending a Fifth, after a like Interval of a falſe Fifth, or a Tritonus, a Leading-note might not poſſibly happen in the Chord, by reaſon that each of thoſe Notes in the Baſs might be deemed as paſſing Fifths, ſeeking the Governing-note, or Fifth of the Key, as appears at *G*, *H*, *J*. But this can take Place but between the ſecond and the ſixth Note in flat Keys, which make between themſelves theſe Intervals of a falſe Fifth, or a Tritonus.

According to our foregoing Rule, the Note at *D* ought to carry the Chord of the Sixth; but as the Sixth could be but flat, according to the Key of the Note that precedes and follows it, we obſerve that the Note at *E* quits its Flat immediately afterwards; and as we muſt always be guided by what follows, rather than by what precedes, it is better to give the perfect Chord to that Note *D*, in order to avoid a falſe Relation with what follows, and obſerving, at the ſame Time, our Rule touching the conſonant Progreſſion of the Baſs.

The Note at *E* carries the Chord of the falſe Fifth, for the Reaſons we have juſt now given, ſince there appears an Interval of a falſe Fifth between it and the preceding Note.

ARTICLE II.

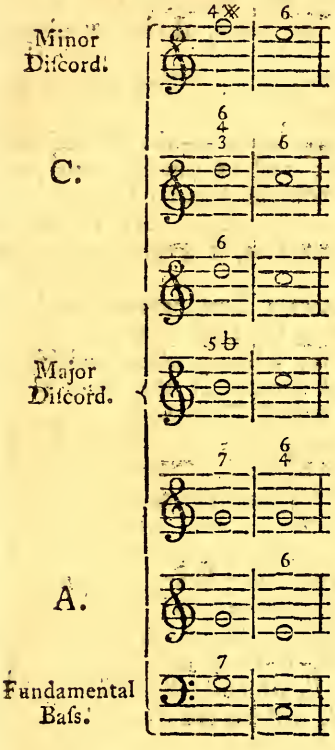
Of imperfect Cadences.

BEſides the natural Progreſſion of the Baſs in perfect Cadences, there are others to be found therein, that have a great Relation to it, which are called imperfect Cadences.

We ſay that imperfect Cadences have a Relation with the Perfect, not in the Progreſſion of the Baſs, but by a Conformity of Harmony; to diſtinguiſh which, we muſt place together all the Sounds that compoſe the perfect Cadence, and take the Progreſſion

Progreſſion of each Part for a Baſs, the Chords of which appear to be different, but it ariſes only from their various Diſpoſition.

E X A M P L E.



In order to hear all theſe Parts together, we muſt leave out the Parts *C* and *A*, by reaſon of their too great Affinity with the upper Part, for the Note that reſolves the minor Diſcord, ought not properly to be doubled on this Occaſion; but we may uſe the Parts *A* and *C*, by leaving out the upper Part, having placed them together, the better to ſhew the ſeveral Progreſſions, whereby it is obvious, that thoſe Parts which make Diſcords have a fixed Progreſſion, and that the other Parts may aſcend or deſcend; for the Note of the fundamental Baſs, which is in the three lowermoſt Parts, may remain upon the ſame Degree, or deſcend a Third in the ſame Manner as it naturally deſcends a Fifth, by obſerving to leave the Seventh out of the Chord, when it deſcends a Third *A*; becauſe that would create, as it were, two Octaves together, though that might be tolerated, eſpecially in four Parts.

All theſe Progreſſions are to be found in the Example of the Octave, Chap. XI. with the ſame Chords that they bear in this Example, and for a greater Certainty you may take for a Baſs any one of the Parts, provided you avoid placing over the other Parts the two loweſt Baſſes; the reſt will have together a good Effect, in whatever Manner it be diſpoſed, and the Chords figured in one Part will be contained in the other Parts.

In moſt of our Examples one may have obſerved this Sort of imperfect Cadences, but they do not always happen upon the firſt Part of the Bar, by reaſon that they are uſed but in a diatonic Progreſſion, without making a final Concluſion.

ARTICLE III.

How the Key *may be diſtinguiſhed, wherein the Progreſſion of the imperfect* Cadences *are uſed.*

IT is certain that a diatonic Progreſſion leads us into ſeveral different Keys; to diſtinguiſh the ſame, there are ſeveral Things to be obſerved.

1. The Leading-note decides it at once, and here follows the Manner of diſcovering it in the Baſs.

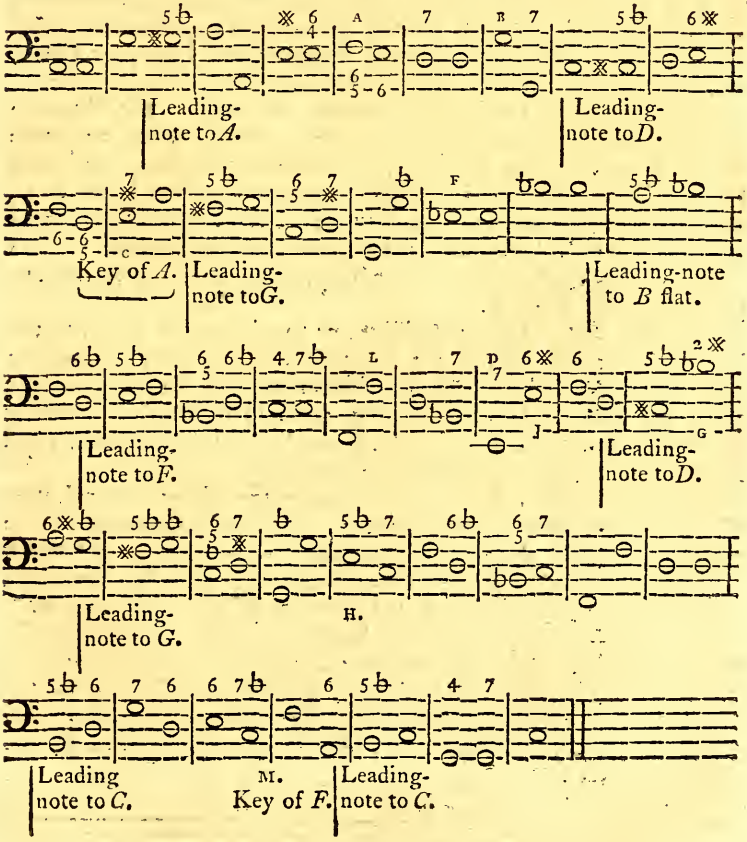
The Key-note being known, you know at the ſame Time its Leading-note, or ſharp Seventh; and as this Key can proceed but only upon certain Notes contained in its Octave, according to the ſharp Key of *C*, or the flat Key of *A*; if one of thoſe Notes is altered by a Sharp or a Flat, it is certain that the Key changes.

The firſt Sharp that appears, ſhews a Leading-note, and, if there happens two or three together, the Laſt is always to be deemed the Leading-note; therefore, a Sharp placed againſt *F* makes it to be a Leading-note, and denotes at the ſame Time the Key of *G*; if with this Sharp againſt *F* we find another at *G*, *F* ſharp is no longer the Leading-note, and it will be *G*, which at the ſame Time denotes the Key of *A*; ſo that reckoning or counting according to the Order and Poſition of Sharps, *F*, *C*, *G*, *D*, *A*, &c. we cannot be miſtaken, and, whatever Flats are found intermixed with theſe Sharps, it doth not alter the Caſe. But, if there ſhould not appear any Sharp, then a Flat denotes a new Key, and the Leading-note will be that Note againſt which another Flat ought to be added, ſuppoſing that we were obliged to it; for Inſtance, if there be a Flat againſt *B*, and no ſharp appears, the Note *E*, which is the Note againſt which a new Flat might be placed, will be the Leading-note; likewiſe, if a Flat is placed againſt *E*, *A* will then be the Leading-note, ſo that reckoning according to the Order and Poſition of Flats, *B*, *E*, *A*, *D*, &c. ſuch of theſe Notes againſt which no Flat is placed, and that immediately follows one that hath a Flat, will always be the Leading-note. Take Notice of what we have ſaid in the firſt Article, that the Interval of a falſe Fifth, or a Tritonus, ſhews it in the Progreſſion of the Baſs, for that Note which could have a Flat againſt it, makes the Tritonus above, or the falſe Fifth below that which ought to have the laſt Flat.

2. As the Baſs doth not always reach to the Leading-note, and the Key may nevertheleſs change, there often happening in the Baſs an Interval of a falſe Fifth, or a Tritonus, ariſing from the

the ſecond Note of a flat Key and the Sixth, or rather from the Sixth to the Second, provided there be no Sharp, for this always decides it; you muſt obſerve if the Key which theſe Intervals, or ſome other Marks, denote, bears a Relation with the Key that you quit; and if after the Stop or Pauſe, which in ſome Shape is felt in a diatonic Progreſſion, there doth not follow a Note which bears a greater Relation to a particular Key, than to another, eſpecially when after the laſt Note in a diatonic Progreſſion there follows another in a conſonant Progreſſion, which often leads to ſome final Cadences, for then the Key is decided.

E X A M P L E.



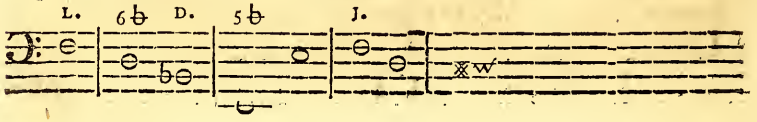
After the firſt Leading-note (which is eaſily diſtinguiſhed) we find a diatonic Progreſſion from the Note *A* interrupted at *B*, where the Rule of Sevenths is to be followed; and this Interruption which leads us to a Cadence upon the Note *C*, obliges us to ſuit to its Key the Notes in a diatonic Progreſſion from the Governing-note of the Key of *A*, after which Note nothing appears to oblige us to keep within that ſame Key of *A*; which is the Reaſon why we have given the Chord of Six and Four to the Governing-note repeated, the better to unite its Harmony with thoſe Chords that follow; beſides, the Note *G*, which becomes natural at the Letter *B*, ſhews it to be no longer a Leading-note, and, not finding any Sharp or Flat until the Cadence of *C*, we clearly ſee that the Key of *C* manifeſts itſelf from the Note at *A*; becauſe you muſt always have a greater Regard to the Key that follows, than that which you are in, eſpecially when you may ſuit the Chords to the following Key, there being no Sharp or Flat, nor any conſonant Progreſſion, or Stop or Pauſe, that might induce you to follow another Road.

As the Sharp to the Note *G* remains no longer, the Sharp to *C* which follows, denotes a new Key, and the Stop or Pauſe which is made at the Letter *C*, after which follows a conſonant Interval that requires a Seventh upon that ſame Note at *C*, obliges us to return into the Key of *A*, ſince it is at that ſame Note that the Progreſſion of a Fourth aſcending finiſheth.

The Sharp at *F* denotes a new Key, ſince there doth not appear any other after it.

The Flat at the Letter *A* obliges us to give a flat Third to the Note that precedes it, for a greater Conformity of Harmony; and, the Flats being upon the Notes *B* and *E*, we therefore judge the Note *A* to be a Leading-note, after which *E* quitting its Flat becomes a Leading-note, ſince the Flat ſtill remains upon *B*, there not appearing any Sharp againſt it.

The Interval of a falſe Fifth between the Notes at the Letter *D* might produce a Leading-note at that Place, ſince that Note which one would deem as ſuch, aſcends a Semitone at *F* (which is the natural Progreſſion of a Leading-note) but the conſonant Intervals that are uſed from the Note at *L*, where the Key of *F* ends, obliges us to give to the following Notes perfect Chords, or of Sevenths, according to the different Intervals of the Baſs, and engages us, at the ſame Time, to ſuit our Chords to the Key, denoted by the Leading-note that follows; we do not ſay but that, according to the Rules of a Progreſſion by Thirds, one might do thus:



And in that Caſe the Key of *F* would be continued until the Note *D*, which is followed by its Leading-note *C* ſharp, that is arbitrary, when good taſte directs us; this Taſte, which delights in Variety, directs us to quit a Key that hath been heard too long.

The falſe Fifth, which is taken upon the Leading-note to the Note *D*, is not immediately reſolved by the Chord that follows; but one may obſerve that it makes alſo the Sixth to the Note at the Letter *G*, without altering the Chord; and that it is reſolved immediately afterwards, by deſcending upon the ſharp Sixth to the next Note, where the diatonic Progreſſion obliges us to make the harmony ſuitable to the Key, which the following Leading-note denotes.

As we have not hitherto taken Notice of the Chord of the extreme ſharp Second, which the Note at *G* carries, it is needleſs at preſent to give any Attention to it.

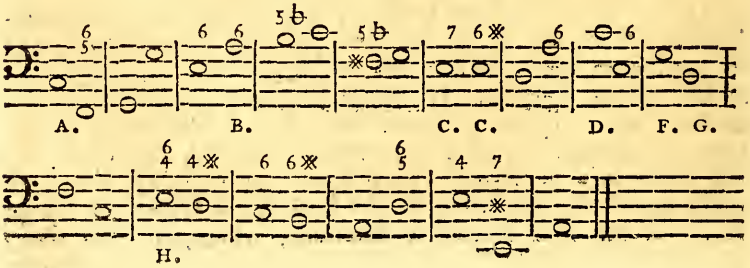
The Note at *H* becomes a Leading-note, as well by reaſon of the Progreſſion of a Semitone between it and the Note that follows in the next Bar, as by reaſon that the Chord of the falſe Fifth which it carries, is the ſame as the Seventh, which the Note immediately following ought to carry, ſince that next Note aſcends a Fourth; beſides, there do not appear any more Sharps, and the Flat remains upon the Note *B*; conſequently the Note at *H* is the Leading-note; after which the Flats and Sharps diſappearing, there is no other Leading-note, but the Note *B*, which denotes the Key of *C*, being obliged to give to the Notes of its Key the Chords that are preſcribed to them, and thus until the End, notwithſtanding the Progreſſion of a Fourth aſcending at *M* obliges us to give a Chord of a Seventh to the Note *C*, and to give the perfect Chord to the Note *F*, ſince that Note is ſtill followed by a conſonant Interval; ſo that the perfect Chord which the Note *F* carries, makes it a Key-note, but the Flat at *B*, that ought to take Place in this Key, being left out, and there not appearing any Sharp or Flat, the Note *B* becomes a Leading-note, having interrupted the Key of *C*, for an Inſtant only for Variety; becauſe it could be done according to the conſonant Progreſſion of the Baſs.

To end this Subject we ſhall ſay, that all conſonant Progreſſions are to be our Guide, and that diatonic Progreſſions are to be relative to the conſonant Progreſſion that follows, rather than to that which precedes. If the Leading-note cannot be diſtinguiſhed, there appears a certain Succeſſion of Chords in a diatonic Progreſſion from the laſt conſonant Chord, and which the laſt Note in a conſonant Progreſſion ought to carry, which we ought not to quit, according to the Rule of the Octave in Chap. XI. If the Baſs aſcends a Semitone, which, in that Caſe, might

might be taken for a Leading-note, we muſt examine if there do not follow ſome Sharps, or ſome Notes that quit their Flat, by reaſon that the Leading-note is thereby ſooner diſtinguiſhed than by a Progreſſion of a Semitone aſcending; which may be done, in ſharp Keys, from a Third to the fourth Note, and, in flat Keys, from the Second to the Third, or from the Fifth to the Sixth, this Sixth nevertheleſs deſcending immediately afterwards.

If, immediately after a diatonic Progreſſion, there follows a conſonant Progreſſion, the Note that ends the diatonic and begins the conſonant Progreſſion, ought to bear the perfect Chord, or that of the Sixth; if it ought to carry the perfect Chord, it will be preceded by its Leading-note by aſcending a Semitone, or elſe it will be the Governing-note preceded by a whole Tone; if it be the Third, in a flat Key, it will be preceded by aſcending a Semitone, and, in a ſharp Key, by aſcending a whole Tone: And if, on the contrary, theſe Notes are preceded in deſcending, the Key-note will always be preceded a whole Tone, the Governing-note but a Semitone in flat Keys, and a whole Tone in ſharp Keys. Now it will be impoſſible but that, by knowing theſe different Progreſſions in the ſeveral Keys, you muſt underſtand ſomething, ſince you already know the Relation that a Key ought to bear to that you quit, its Difference, in reſpect to the major and minor Third, being taken from its Third and its Fifth, which are to be made up of the Notes contained in the Key that you quit. Beſides, it is almoſt impoſſible but that a Leading-note will appear either before or after, and that the conſonant Progreſſion that follows will lead to a certain Concluſion that may guide us; for it is to be obſerved, that all Concluſions are determined by the Progreſſion of a Fourth or a Fifth, excepting that, after one of theſe Progreſſions, there follows a diatonic Progreſſion of two or three Notes, either by aſcending or deſcending, upon the Laſt of which the Air or Melody reſts, and makes, as it were, a Pauſe, or a Stop, in reſpect to the new conſonant Progreſſion that begins again.

E X A M P L E.



Although

Although the Baſs deſcends a Fifth at *A*, we are not to take the Seventh upon the firſt Note, becauſe the ſecond Note ought not to carry either the perfect Chord or the Seventh, becauſe we are to be guided by the diatonic Progreſſion that follows, where the Melody reſts.

The Melody which reſts upon the third Note after *B*, obliges us to ſuit to its Key the Note at *B*; conſequently the Note that precedes it, ought to carry but that Chord which is required by this Key, and not by that which is required by a conſonant Progreſſion, becauſe the Note at *B* is not to carry either the perfect Chord or the Seventh.

We give a Chord to the Note at *C*, ſuitable to the Key of the following Note where the Melody reſts; and we give the Chord of a Seventh to this Note at *C*, preferable to that of the ſmall Sixth, by reaſon that this Seventh is found prepared by the preceding Chord, and it is reſolved by the Sixth to the ſame Note. We ſpeak of it again in the following Chapter.

We obſerve the Rule preſcribed to thoſe Notes that proceed by Thirds at *D* and *F*, and, for a better Certainty, as to the Choice we are to make of the Chords in this Caſe, obſerve, that the Notes in the firſt Part of the Bar are to carry perfect Chords, rather than thoſe in the ſecond or laſt Part of the Bar, on which the Chord of the Sixth is then ſuitable; though one might give the perfect Chord to each of thoſe Notes, as we have done at *G*.

The Concluſion, which is felt by the conſonant Interval at the End, obliges us to ſuit to its Key the Chords of all the preceding Notes in a diatonic Progreſſion from *H*.

ARTICLE IV.

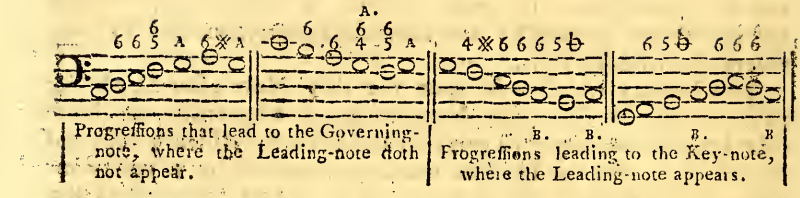
How to diſtinguiſh in a diatonic Progreſſion, whether the Melody reſts or ſtops upon the Key-note, *or its* Governing-note.

IN order to diſtinguiſh, in a diatonic Progreſſion, if the Melody reſts upon a Key-note or a Governing-note, you need only to remember, that, in order to paſs from a Key-note to its Governing-note, the Baſs aſcends a Fifth or deſcends a Fourth; and, from a Governing-note to the Key-note, the Baſs aſcends a Fourth or deſcends a Fifth.

Now, if a diatonic Progreſſion exceeds that Compaſs, the Leading-note will then appear in the Baſs, or not; if it appears, it will ſhew, at the ſame Time, the Key-note; if not, you may then be ſure that the Melody reſts upon the Governing-note.

EXAM-

E X A M P L E.



Progreſſions that lead to the Governing-note, where the Leading-note doth not appear.

Progreſſions leading to the Key-note, where the Leading-note appears.

The Baſs, which aſcends a whole Tone at *A*, ſhews you the Governing-note, and the Key-note at *B*, where the Baſs aſcends but a Semitone.

Again, by whatever Note of the Key a diatonic Progreſſion begins, the conſonant Interval between that Note and that which precedes it, the Pauſe or Reſt that immediately follows, the whole Tones and Semitones that happen in a diatonic Progreſſion, and the Interruption of this laſt Progreſſion by a conſonant Progreſſion, will certainly ſhew you the Place: It is true, that the conſonant Interval which precedes a diatonic, doth not ſo clearly determine it, as that which follows a diatonic Progreſſion, as the Example in the preceding Article proves; but the whole Tones and Semitones that make up each Interval, in a diatonic Progreſſion, are ſufficient of themſelves to put you in the Way of it: It is therefore proper to obſerve the Place which the Semitones occupy in each Mode or Key, as well aſcending as deſcending, and to remember that the diatonic Progreſſion is ſeldom interrupted but after a Key-note, a Third, or a Governing-note; and if it ſhould be otherwiſe, as it ſometimes happens, certainly the conſonant Progreſſion that follows, as well as the above Rules on this Subject, will be ſufficient, ſo as not to be miſtaken. We already know what the Progreſſion of a Third, a Fourth, and a Fifth requires, as well aſcending as deſcending, and how the ſame Chord may ſometimes be repreſented by two Notes of the Diſtance of a Third, according to the Progreſſion that follows: In ſhort, if you will but give due Attention to all that hath been ſaid on this Subject, and ſtick to Modulation, which is always to be our firſt Object, and obſerve the Relation of the Chords with the Progreſſion of the Baſs; and, if you compare the Whole with a fundamental Baſs, and take Notice of the Leading-note, which is a very great Help in this Caſe; it will be almoſt impoſſible to be miſtaken; ſince, when once you have diſcovered the Chord, which a certain Note ought to bear, you have only to follow the Rule of the Octave from that Note, until that where the diatonic Progreſſion is interrupted. See Chap. XI.

As to the Variety of Harmony which may be therein otherwiſe introduced, it will be learnt by what follows.

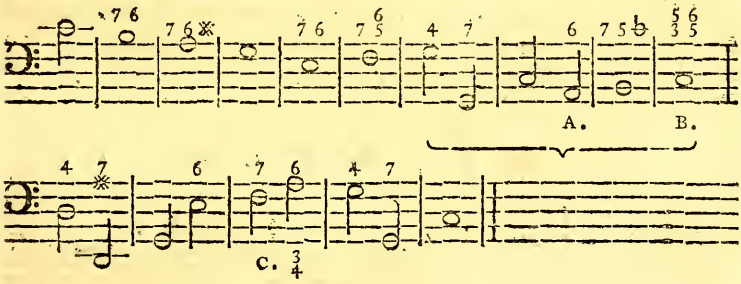
CHAP.

CHAP. XXVI.

Of the Manner of practiſing the Seventh, *upon every Note of a Key, in a diatonic Progreſſion.*

THE Key-note is the only one that ought always to appear with the perfect Chord, whereas that of the Seventh may be given to all the other Notes, with this Difference, that, in a Progreſſion of a Fourth aſcending to a perfect Chord, or of a Seventh, all the Notes may be deemed Governing-notes, and may, in that Caſe, carry the Chord of the Seventh; but, in a diatonic Progreſſion, that Note which carries the Chord of a Seventh, muſt be divided into two Parts, or muſt be repeated twice (which is very near the ſame Thing) in order that, upon the ſecond Part, it may carry that Chord of the Sixth which is ſuitable to it, according to the next following Note: And, in that Caſe, the Seventh muſt always be prepared, ſaving the Firſt, which cannot be prepared according to the Progreſſion of the Baſs.

E X A M P L E.



A, *B*. I could have ſuited the Chords of theſe Notes, in a diatonic Progreſſion, to the Key which ſhews itſelf by the Concluſion that follows; but I may alſo continue in the Key that precedes it, and upon the ſecond Part of the Key-note *B* I take the Chord ſuitable to the Key that follows.

The Note at *C* ought naturally to bear the Chord of the great Sixth, which may be heard after that of the Seventh; but, inſtead of reſolving that Seventh upon the Sixth to the ſame Note, we reſolve it by the Fourth to the following Note, becauſe the Chord of the ſmall Sixth, which this laſt Note bears, and that of the great Sixth, which the Note at *C* ought to bear, are, in the Main, but one and the ſame Chord: From hence

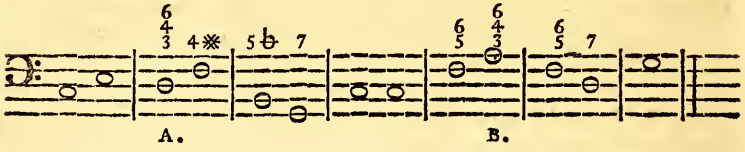
proceeds this Rule, that, when a Diſcord is uſed, we muſt not quit it without reſolving it; and, as the Note in the Baſs, by which this Diſcord ought to be naturally reſolved, doth not always appear, you muſt ſee if the following Note in the Baſs cannot bear a Chord made up of the ſame Sounds that would compose the Chord by which the Diſcord ought to have been reſolved; which we are going to explain.

CHAP. XXVII.

How one and the ſame Diſcord *may be uſed in ſeveral* Chords *ſucceſſively following upon different Notes, and how it may be reſolved by Notes that ſeem to be foreign to that Purpoſe.*

IT muſt be obſerved, that the Chord of the Seventh is compoſed of four different Notes, and that theſe Notes may be uſed one after the other in the Baſs, and that each of thoſe Notes will bear different Chords in Appearance, although they are but one and the ſame Chord (ſee Chap. XII.) ſo that having uſed a certain Diſcord in a Chord, which cannot be reſolved by the following Chord, you muſt ſee whether that ſame Diſcord cannot be uſed in the Chord to the following Note, and ſo on, until you find that it can be reſolved.

EXAMPLE.



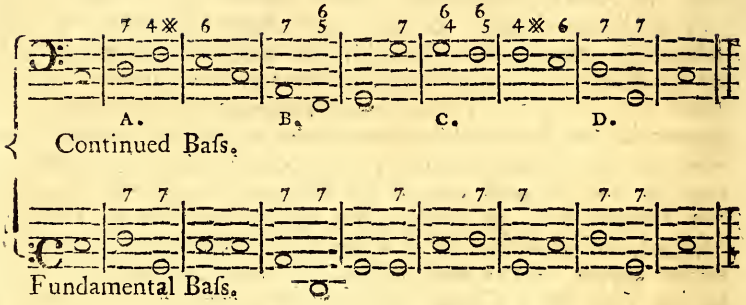
The Difference in the Examples *A* and *B* conſiſts in the major Diſcord, which appears in the Firſt, and only the minor in the other.

In the Chord of the ſmall Sixth *A*, which is natural to the ſecond Note of the Key, there happens to be a Diſcord between the Third and the Fourth, which ought to be reſolved by making the Third to deſcend, which cannot be done upon the next Note; but the ſame Chord makes that of the Tritonus to this laſt Note, where the Diſcord cannot as yet be reſolved, and thus

thus until the Note *C*, where the Diſcord is reſolved by deſcending upon the Third to *C*, and where it may be obſerved, that the Note *G*, which bears the Chord of the Seventh, ſerves as a fundamental Note to theſe four different Chords; ſo that, when you meet with a Diſcord, you muſt always reduce it to its fundamental Chord, and ſeek afterwards in the Baſs that Note by which this Diſcord may be reſolved; for, whilſt there appear in the Baſs but the ſame Notes contained in the Chord wherein that Diſcord is uſed, it is certain that it cannot be thereby reſolved, and one of the Notes of the Chord, whereby the Diſcord may be reſolved by deſcending if it be a minor Diſcord, or by aſcending if it be a major Diſcord, muſt abſolutely appear in the Baſs, which is eaſily diſtinguiſhed after having reduced a Chord diſſonant to its fundamental Note; which may be eaſily done, by ſaying, If the fundamental Note to this fundamental Chord governs ſuch a Note, which is a Fourth above it; conſequently I muſt find that Note in the Baſs, or at leaſt one of the Notes that compoſe its perfect Chord, or that of the Seventh, ſuppoſing that the Melody doth not reſt there; if you meet but with the Fifth, then that Fifth, or Governing-note, being the fundamental Note to the diſſonant Chord that appeared, muſt be divided into two Parts, if it be not repeated, in order that upon the ſecond Part it may bear the Chord derived from the Note that it governs. There is ſome ſmall Exception to be made to this laſt Rule, which will be explained elſewhere.

From what hath been ſaid, it follows that if a Seventh is taken upon a Note that ought naturally to bear another Chord, in reſpect to that which follows, or according to the Rule of the Octave, and that this Note hath not a ſufficient Length, or Value, to cauſe the Chord which is ſuitable to it to be heard; in that Caſe the next muſt bear the ſame Chord, according to the fundamental Note, that is to ſay, that the Notes, contained in the Chord to that ſame next Note, be thoſe of which the natural Chord to the firſt Note ought to have been compoſed; ſee the following Example.

E X A M P L E.



The Chord of the ſmall Sixth, which the ſecond Note of the Key at *A* and *D* ought to bear, is found in that of the Tritonus, on the next Note after *A*, and in that of the Seventh, on the next Note after *D*.

The Chord of the ſmall Sixth, which the ſixth Note at *B* ought naturally to bear in deſcending, is found in that of the great Sixth to the following Note.

The Seventh which is heard upon the Governing-note, is reſolved by the Sixth to that ſame Governing-note repeated at *C*; from hence ariſes that a Diſcord may be reſolved by divers Conſonants, by reaſon that it is always regularly reſolved, provided it be by deſcending upon a Conſonant to the ſame Note that carried a Diſcord, or to the next Note, if that Diſcord be a Minor; for, if it be a major Diſcord, it will be reſolved by aſcending upon a Concord, or a conſonant Note.

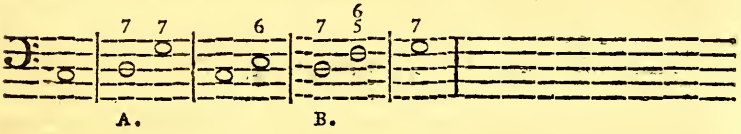
There is another obſervation to be made, which is, that if, according to the natural Sequence of Chords, you find yourſelf in a Manner obliged to give to a Note a Chord derived from the Chord to the next following Note, you ought in that Caſe to obſerve whether that firſt Note could not carry the Chord that governs the next Note; if ſo, it would be much better to give it this governing Chord, than that which in the Main would be but the ſame Chord to the next following Note, eſpecially when the Diſcord that is to be heard in this firſt Governing-note, may be prepared by a conſonant Note in the preceding Chord.

A Sequence, or Succeſſion of Harmony, is nothing elſe but a Link or Chain of Keys and Governing-notes, the Derivatives of which you ought to know perfectly, in order to contrive it ſo, that one Chord may always govern the next; for a perfect Chord and its Derivatives do not govern any Thing, for after a perfect Chord you may remove to any other Chord, provided you keep to the Rules of Modulation; but a diſſonant Chord

always

always governs the next Chord, according to our Examples of 7, 7 and 6, 2, 4♯, $\frac{6}{5}$, and 5♭; and it is upon thoſe Occaſions that we ſhould be very careful to know and diſtinguiſh Derivatives, in order to give them a proper Sequence, though the ſeveral Rules we have given for each Chord, and for each Progreſſion of the Baſs, are ſufficient to overcome theſe Difficulties.

Example of the Preference that ought to be given to a Chord, *in reſpect to that which follows.*



The ſecond Note *A* ought naturally to bear the Chord of the ſmall Sixth, derived from that of the Seventh to the Governing-note of the Key, which appears immediately afterwards; but, for a greater Variety, we ſhall obſerve that this ſecond Note governs that ſame Governing-note, and therefore we give it the proper Chord in that Caſe; and, though that Governing-note doth not immediately appear after *B*, yet it is plain that the Note which is between them, can carry but a Chord, derived from that of the Seventh to the Note at *B*; and conſequently the Note at *B* is to bear the Chord of the Seventh, eſpecially as the Seventh is therein prepared by a conſonant Note in the preceding Chord.

Obſerve that all our Rules have hitherto only regarded Harmony, and that the Melody of each Part is therein limited, ſaving that of the Baſs, upon which this Harmony is grounded; therefore it will be proper to wait until you have attained to a thorough and perfect Knowledge of Harmony, before you proceed to Melody, upon which we ſhall treat, after having explained thoſe Licences that ſerve as an Ornament to Harmony by the Variety they introduce.

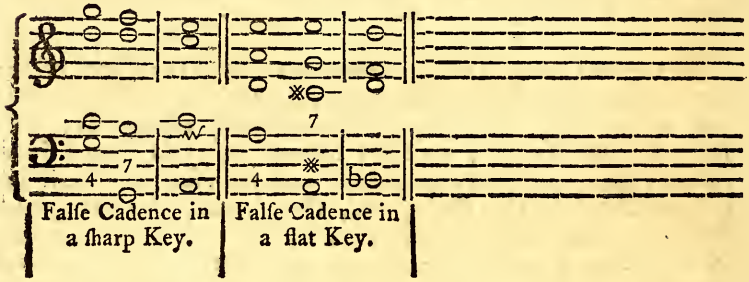
CHAP.

CHAP. XXVIII.

Of Licences, *and, firſt, of the falſe or flying* Cadence.

A Falſe or flying Cadence is a certain Progreſſion of the Baſs, which interrupts the Concluſion of a perfect Cadence; for if after the Chord of a Seventh upon the Governing-note of the Key, inſtead of falling naturally upon the Key-note, you cauſe the Baſs to aſcend a whole Tone, or a Semitone, in that Caſe the perfect Cadence is interrupted, and the Seventh is thereby reſolved by the Fifth to that Note ſo aſcended, which in ſharp Keys aſcends a whole Tone, and in flat Keys, only a Semitone.

E X A M P L E.

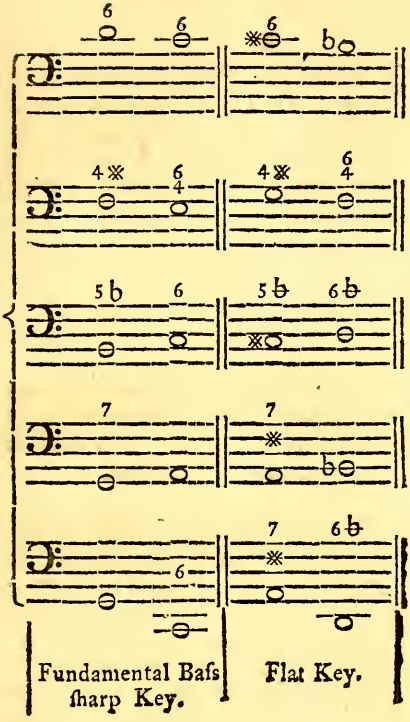


In the perfect Chord that ends this Cadence, the Octave to the Third is heard preferably to that of the Baſs, which is contrary to the natural Order; but that proceeds rather from the falſe Progreſſion of the Baſs, than that of the Parts, wherein it is obſervable, that the minor Diſcord is always reſolved by deſcending, and the major by aſcending; and that this Third doubled repreſents the fundamental Sound that ought to have been naturally heard; although, in ſharp Keys, we might deſcend upon the Octave to the Baſs, inſtead of aſcending upon the Third, as we have marked it by the Guide ; but, in flat Keys, the Example muſt abſolutely be followed.

We ſhall now invert the Chords that compoſe this falſe Cadence, in order to diſcover the Advantages that may be taken from it.

E X A M-

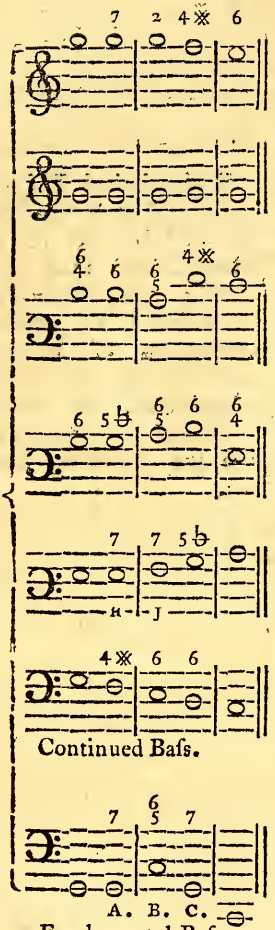
E X A M P L E.



Each of theſe Baſſes being placed under the other, you will hear all the different Chords that are figured; from whence may be deduced an agreeable Connexion of Harmony and Melody, in a diatonic Progreſſion, of the Baſs aſcending and deſcending. See the following Example.

E X A M-

E X A M P L E.



When this Part ſerves for Baſs, the Part *D* is to be left out, and the Part *F* is to be altered in the two laſt Notes; the ſame Thing is to be done in this, when the Part *F* ſerves for the Baſs.

When this Part ſerves for Baſs, it muſt proceed in a diatonic Progreſſion until the End, and rather by aſcending than deſcending.

When this Part ſerves for a Baſs, the Part *D* is to be left out, by reaſon that the irregular Cadence, which the Part *D* makes againſt the Notes *B C* of the fundamental Baſs, cannot be inverted by a Chord of a Seventh, or of a Second, upon the Firſt of thoſe two Notes.

In this Part the perfect Cadence is avoided from *A* to *B*, by the Sixth's being added to the perfect Chord at *B*; which prepares an irregular Cadence, avoided by adding the Seventh, in order to conclude by the perfect Chord.

If the Fifth is left out of the Chord to the Note at *B*, you will then hear a falſe Cadence from *A* to *B*, as well as at *H J*, in the Part *G*.

The Progreſſion of the upper Parts is limited by that of the continued Baſs; but if you would uſe them as Baſſes, by Turns, you may then give them whatever Progreſſion you think proper, that is to ſay, the conſonant Progreſſion may be changed into a diatonic

diatonic Progreſſion, without altering the fundamental Harmony, and you will then ſuit to it the Progreſſion of the Parts above it.

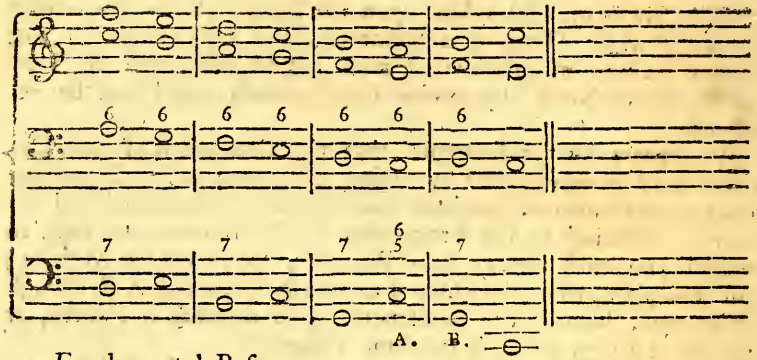
The Sixth may be taken upon the Second of two Notes that aſcend a whole Tone, or a Semitone, in a falſe Cadence; but then the Chord of the Seventh muſt not be uſed upon the Firſt of thoſe two Notes, by reaſon that Seventh could not be reſolved.

It appears by the Example, that the Concluſion of each Cadence may be interrupted by adding a Diſcord to the Note that ends theſe Cadences, provided that Diſcord be prepared and reſolved according to the Progreſſion of the fundamental Baſs, to which you muſt always have Recourſe, to prevent a Miſtake; for it is plain, that this Diſcord cannot be prepared at *B*, though it be good, becauſe the fundamental Baſs deſcends a Fourth, or aſcends a Fifth, which is the ſame Thing.

The irregular Cadence may be reckoned amongſt the Licences, as well as the Diſcords that cannot be prepared; as when the fundamental Baſs aſcends a Third, a Fifth, or a Seventh, with all that proceeds by inverting theſe different Progreſſions; though what we call Licence, in this Caſe, is inſeparable from good Harmony; which is the Reaſon why we have choſen this Place to ſpeak of it, for the better inſtructing Beginners.

Beſides the Licences that the falſe Cadence can produce, by inverting it, there is a certain Succeſſion of Sixths, which is attributed to Taſte, and which *Zarlino*, *Terza parte*, Cap. 61. Fol. 291 and 292, ſtrictly forbids, ſaying that the ſeveral Fourths together, which are therein heard, make pretty near the ſame Effect as ſeveral Fifths, if the Chords be inverted according to the Example which he gives. Nevertheleſs it is plain, that, according to our Rules, this Succeſſion of Sixths proceeds from the falſe Cadence, and from the Liberty we have of not preparing a Diſcord in fundamental Progreſſions of the Baſs aſcending a Third, a Fifth, or a Seventh.

E X A M P L E.



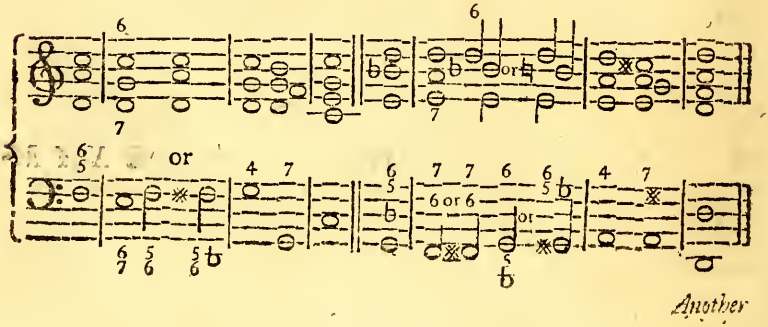
Fundamental Baſs.

Each Bar repreſents a falſe Cadence, excepting the Penultima, which repreſents a perfect Cadence, avoided by adding a Sixth at *A*; this Sixth preparing an irregular Cadence, which is likewiſe avoided by adding the Seventh at *B*, where the perfect Cadence is prepared and concluded upon the laſt Note.

If the two upper Parts were inverted, you will then hear as many Fifths as there are Fourths; but the Inſipidity of ſeveral Fifths is ſo much diminiſhed, by inverting them, that we are not to attribute to the Fourths what concerns only the Fifth and the Octave.

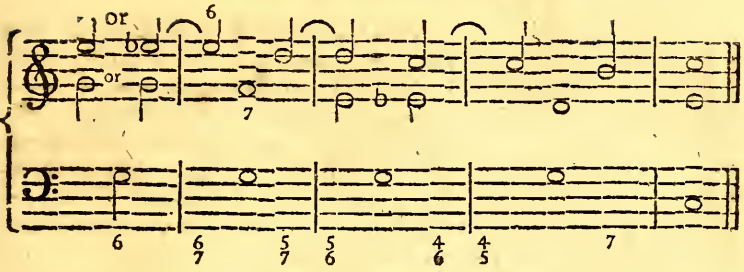
The Seventh is ſometimes by Licence joined with the Sixth, which creates a very harſh Chord; and the only Reaſon why it can be tolerated is, that it is uſed as a paſſing Chord, and the harſh Sounds therein are heard in the preceding and following Chords, and the Note of the Baſs, in this Caſe, can be admitted but by Suppoſition.

E X A M P L E.



Another

Another E X A M P L E.



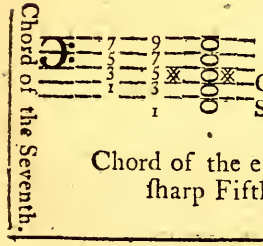
CHAP. XXIX.

Of the Chord *of the extreme ſharp Fifth.*

WE muſt alſo treat of certain Chords that are introduced by Licence; and, firſt, of the extreme ſharp Fifth, we ſay that it can never be uſed but upon the Third in flat Keys.

This Chord, properly ſpeaking, is no other than the Seventh to the Governing-note of a Key, under which is added a fifth Sound, at the Diſtance of a Third.

E X A M P L E.



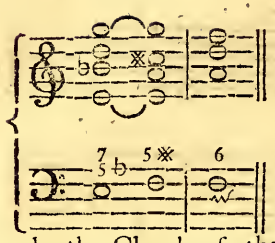
Chord of the extreme ſharp Fifth.

It is not in the Sound added, that you muſt ſeek the fundamental Note of this Chord.

This Chord hath for its fundamental Note the Governing-note of the Key, and will always follow its uſual Progreſſion; the major Diſcord will aſcend, and the minor will deſcend, and the Whole will be reſolved by the perfect Chord to the Key-note; whilſt the Sound added will afterwards make a Part in that perfect Chord, or will deſcend upon that ſame Key-note.

E X A M-

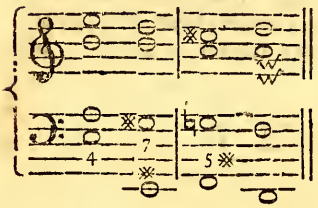
E X A M P L E.



This Chord muſt be prepared by that of the Seventh to the Note that governs the Governing-note of the Key, wherein it appears, that the ſecond Note, which, in this Caſe, governs the Governing-note of the Key, aſcends but a Semitone, inſtead of aſcending a Fourth, whilſt, in the other Parts, you will hear only the Chord of the Seventh to the Governing-note of the Key, which is afterwards reſolved according to our Rules.

This Chord is ſometimes uſed, in order to avoid a Cadence, by cauſing the Governing-note of the Key to aſcend a Semitone upon this Sound added, which, from a ſixth Note, becomes a Third, by reaſon of the Alteration of the Key, and by the Means of a new Leading-note, which the extreme ſharp Fifth creates.

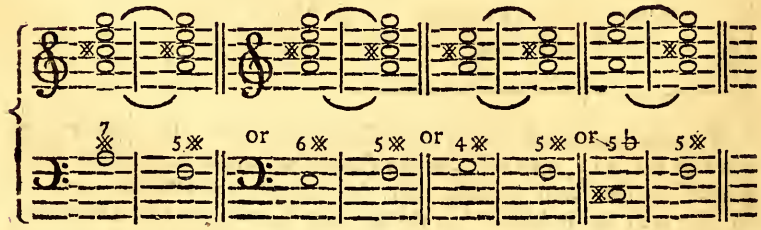
E X A M P L E.



When you compoſe in four Parts, you are at Liberty to place in the upper Part the Notes marked by the Guides in the Room of the others.

This Chord is alſo prepared by that from which it is derived.

E X A M P L E.



There are ſome who ſometimes prepare it by the Fifth to the ſame Note, or by the flat Sixth to the Note which is a Semitone below it, or by the Chords derived from that of the Seventh to the Note, which is but a Semitone below; but that is taking to much Licence.

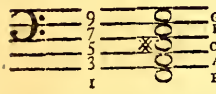
CHAP.

CHAP. XXX.

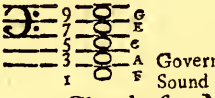
Of the Chord *of the Ninth.*

THIS Chord differs from the preceding Chord, only in the Fifth, which was ſharp in the other, and which in this Chord ought to be perfect; or rather in the Third to the fundamental Sound, which in this Chord is flat, and in the other ſharp; ſo that, if we take a Chord of a Seventh to a Governing-note with a flat Third, we ſhall make that of a Ninth by adding a Note, a Third below that Governing-note.

E X A M P L E.



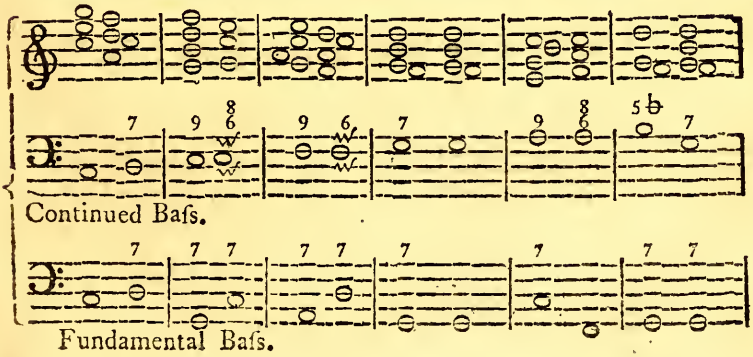
Chord of the extreme ſharp Fifth.

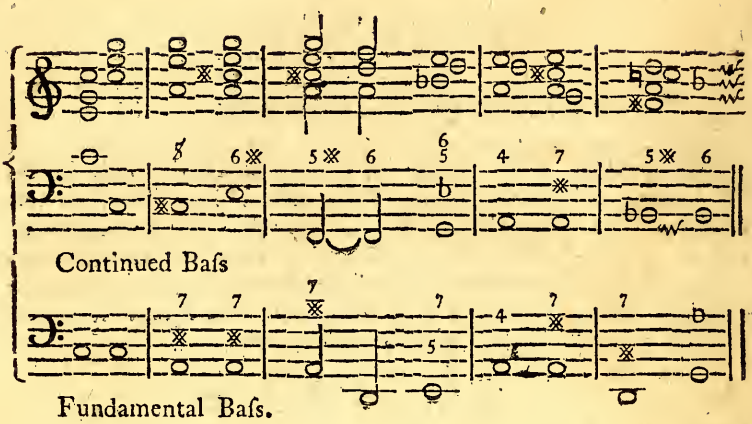


Chord of a Ninth.

It is neceſſary to take Notice, that all Chords by Suppoſition, ſuch as the extreme ſharp Fifth, that of the Eleventh, and that of the extreme ſharp Seventh (we ſhall ſpeak of theſe two laſt Chords in the following Chapter) derive from the Chord of a Seventh to a Governing-note, becauſe, by this Manner, you immediately know how theſe Chords are to be prepared and reſolved; ſo that, by the Means of a fundamental Baſs, you will ſee how the Whole anſwers to our Rules of Sevenths. See the following Example.

E X A M P L E.



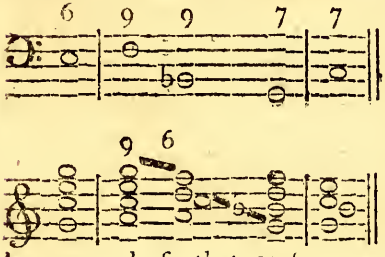


All thoſe Notes in the continued Baſs that carry Ninths, or ſharp Fifths, are to be left out when the fundamental Baſs is made uſe of, otherwiſe the Notes in the fundamental Baſs ought to be above thoſe that are figured by a 9, or a 5♯; becauſe the Sound in the fundamental Baſs, which in that Caſe is ſuppoſed, cannot be heard but above that which ſuppoſes it.

Thoſe Notes that carry Ninths and ſharp Fifths, may either deſcend a Third, as it is marked in the Guides, or remain upon the ſame Degree; for which Reaſon the Ninth may be reſolved two Ways, *viz.* by the Octave, when the Baſs remains upon the ſame Degree, and by the Third, when it deſcends a Third; in which Caſe it may be obſerved, that the Seventh is then reſolved by the Octave, as we ſhall ſhew hereafter.

There are ſome that hold that the Ninth may be reſolved by the Fifth, by cauſing the Baſs to aſcend a Fourth; but the Harmony that proceeds from it ſeems improper: Therefore we ſhall leave it to the Diſcretion of Compoſers of a good Taſte.

Example of the Ninth reſolved by the Fifth.



It might rather be reſolved by the Sixth, by cauſing the Baſs to aſcend a Third; by reaſon that, in this Caſe, the fundamental Harmony would not be altered. See the Guides in the other Example.

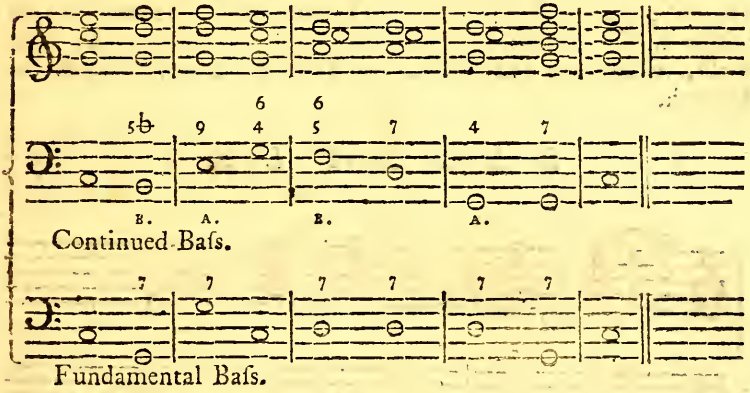
All minor Diſcords by Suppoſition abſolutely require to be prepared, ſo that as ſoon as you ſee that the Ninth can be prepared

prepared by a conſonant Note in the preceding Chord (provided in this Caſe the Baſs aſcends a Second or a Fourth) you may practiſe it by reſolving it afterwards according to the Method preſcribed by the Example, and without going wide of true Modulation.

The Seventh, which may always accompany the Ninth, ought not to be added to it, unleſs it be prepared by a Concord or conſonant Note in the preceding Chord.

Obſerve alſo in this Place that minor Diſcords by Suppoſition may be prepared by another common Diſcord, ſuch as the Seventh, or by the falſe Fifth; and that proceeds by reaſon that theſe laſt Diſcords are contained in the ſame fundamental Chord, having already obſerved at Chapter XII. that one and the ſame Note may create ſeveral Diſcords following, when they proceed from the ſame fundamental Chord.

E X A M P L E.



The Notes *A* of the continued Baſs carry Chords derived from the fundamental Baſs; the like of the Notes *B*; if then we may hear Diſcords by Suppoſition after another Diſcord, and if it be true, that a Diſcord is to be preceded and followed by a Concord, we muſt conclude, in order that this Rule may hold good, that ſeveral Diſcords that are heard following upon the ſame Degree, are not ſuch in Effect, but that they all proceed from the firſt Diſcord which is the Seventh, the fundamental Chord of which doth not change until the Expiration of theſe ſeveral Diſcords in Appearance upon a Concord, as it is obſervable in the Example, and as it really is; ſee Chap. XV. how the eleventh Heteroclite may alſo be prepared by the falſe Fifth.

CHAP.

CHAP. XXXI.

Of the Chord *of the Eleventh, otherwiſe called the Fourth.*

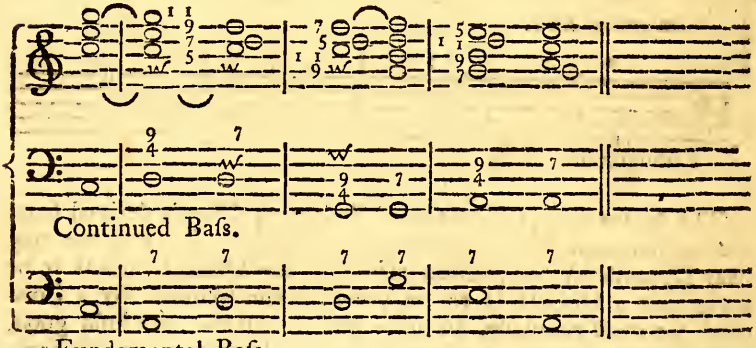
THE Chord of the Eleventh is compoſed of five Sounds, thus *D, A, C, E, G,*

1, 5, 7, 9, 11, where it is ſeen, that the Sound added is a Fifth below that which ſerves as a fundamental Note to the Chord of the Seventh.

This Chord is ſeldom uſed, by reaſon of its extreme Harſhneſs, there being three minor Diſcords in its Conſtruction, as appears by the Numbers 7, 9, 11. Yet the Practice of it is eaſy, by reaſon that three Concords, or conſonant Notes, in the preceding Chord, prepare theſe three Diſcords, by keeping on the ſame Degree; but they muſt not be reſolved all three at once, by reaſon that, as they are minor Diſcords, and muſt deſcend, one could not avoid two Fifths to follow in the Parts; ſo that you muſt firſt reſolve the moſt harſh, which are the Eleventh and Ninth, and afterwards the Seventh.

A, C, E, G,
5, 7, 9, 11,
1, 3, 5, 7,

E X A M P L E.



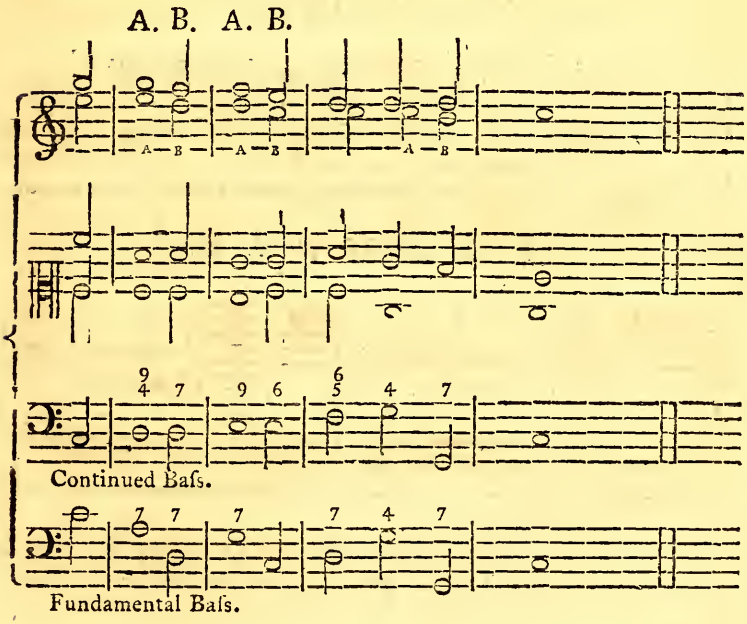
This Example ſhews that the Progreſſion of the continued Baſs is the ſame as that on which a Ninth is taken, in reſpect to the Preparation of that Ninth and Eleventh; but, to reſolve the Eleventh, you will always do well to let the Baſs remain upon the ſame Degree, in order that the Seventh may afterwards be heard; though one might make it aſcend a Third, as it is marked by

by the Guides in the Baſs, in which Caſe, the Chord of the great Sixth, derived from that of the Seventh to the Note that remains upon the ſame Degree, would be heard.

The Guides in the upper Part ſhew the fifth Sound with which this Chord is not always filled up, eſpecially when you compoſe but in four Parts, being at Liberty to place this fifth Sound in Lieu of any one of the others, provided it be not a Diſcord; or if it be, it ſhould be at leaſt prepared.

We here ſpeak of the true Chord of the Eleventh in its full Conſtruction, but its extreme harſhneſs obliges us to leave out the major part of the Sounds that compoſe it, according to what we have ſaid at Chap. XV. and for that Reaſon we may call it heteroclite; by which means it is rendered more ſoft and agreeable, and for this Reaſon it is but ſparingly uſed in all its Fulneſs, though it furniſheth us with agreeable Suſpenſions of Harmony and Melody, when uſed properly; ſee the following Example.

E X A M P L E.



To follow the Cuſtom, we figure this Chord only with a 4, when it is heteroclite; and, when it is filled up with all its

Sounds, we add to it a 9, thus $\frac{4}{-}$ or $\frac{9}{-}$; this Chord, when it is heteroclite, is ſometimes accompanied with the Seventh, and then it is figured thus $\frac{7}{-}$, or $\frac{4}{-}$.

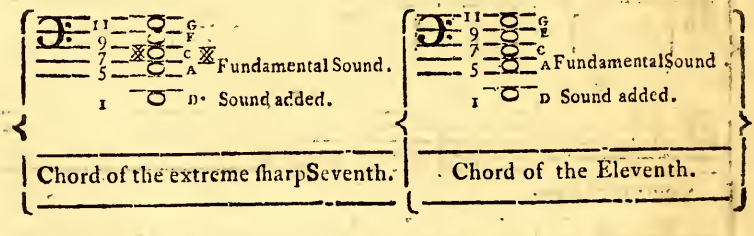
It is certain that the Chords by Suppoſition ſerve only to ſuſpend the Sounds that ought naturally to be heard; which may be obſerved between *A* and *B*, where the Sounds *A* keep in Suſpence thoſe of *B*, which naturally ought to have been heard: You will find it every-where the ſame, when thoſe Chords are uſed, by comparing them with the continued Baſs, and not with the fundamental Baſs, which always repreſents to us a perfect Harmony.

CHAP. XXXII.

Of the Chord *of the extreme ſharp Seventh.*

THE Chord of the extreme ſharp Seventh differs from that of the Eleventh only in the Third to the fundamental Sound, which in this Chord is major, and in the other is minor.

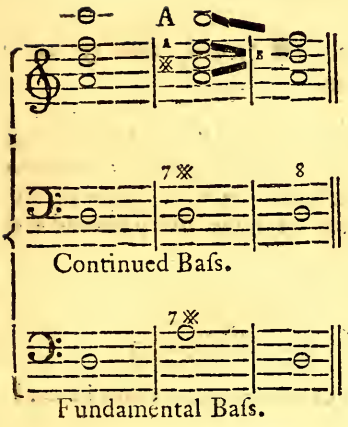
EXAMPLE.



This Chord is never uſed but upon the Key-note, and is to be preceded and followed by the perfect Chord to that ſame Note.

EXAM-

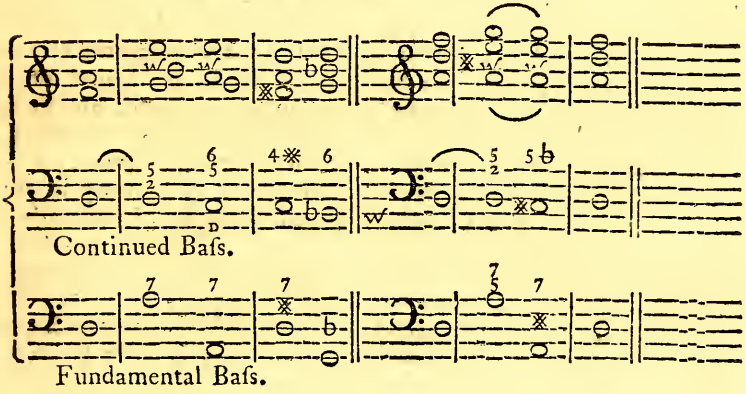
E X A M P L E.



The Sounds *A* keep in Suſpence thoſe of *B*, and theſe Strokes (7) ſhew the natural Progreſſion of the Sounds *A*.

The Sound that makes the ſharp Seventh is often left out of this Chord, when the Baſs deſcends a whole Tone, or a Semitone.

E X A M P L E.



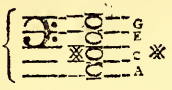
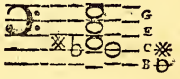
This Chord is figured with a 2, by reaſon that it is prepared as the Second; but, as the Fifth and Fourth meet therein, this Fourth cannot be otherwiſe taken but for a Diſcord by Suppoſition, and, in Effect, we ſee that this Chord repreſents the Eleventh, or the ſharp Seventh, out of which the Sound, that immediately appears afterwards in the Baſs at D, is left out, becauſe that Sound doth not do well to be doubled.

CHAP.

CHAP. XXXIII.

Of the Chord *of the extreme ſharp Second, and of its Derivatives.*

WE ſay that the Chord of the extreme ſharp Second and its Derivatives are borrowed Chords, by reaſon, that the Governing Note lends her Fundamental to the ſixth Note of flat Keys, from whence this Chord of the extreme ſharp Second and its Derivatives proceed, as thus,

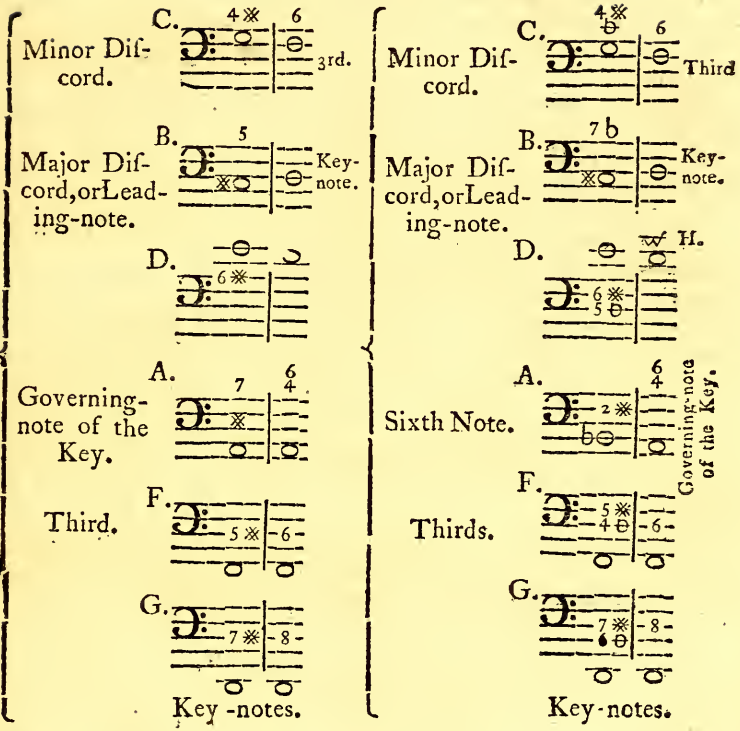
Inſtead of  We find 

Chord of the Seventh. Chord of the extreme ſharp Second.

It is evident that the Chord of the extreme ſharp Second proceeds, in a borrowed manner, from that of the Seventh to a Governing-note of a Key, ſince the Place which the ſixth Note occupies, in this Caſe, is that where the Governing-note of the Key ought to be placed, the Sounds affected to the Chord of a Seventh to that Governing-note being no ways altered, and their Progreſſion, as well in reſpect to the major and minor Diſcords, being anſwerable to thoſe which are naturally fixed to them. Beſides, if the Choice of one of theſe two Notes is arbitrary in the Midſt of a Piece, when you would cauſe to be heard with either of them the Sounds affected to the Chord of a Seventh to a Governing-note of a Key, you are no longer maſter of the Continuation of Harmony, which muſt entirely be anſwerable to this Chord of the Seventh; therefore, the perfect Chord to the Key-note, is equally to follow one or the other Chord. See the following Example.

EXAM-

E X A M P L E.



There happen in theſe borrowed Chords two major Diſcords and two minor, of which thoſe that are foreign, proceed from the Alteration of the fifth Note of the Key to the ſixth Note, where it appears that the minor Diſcords always deſcend, and the foreign major Diſcord doth not always aſcend, as it ought to do, if it was a Leading-note; ſee the Guide *H*, where you can make that Diſcord major to aſcend, as it ought to do, when the minor Diſcord *C* or *A* happen to be in the Baſs.

Obſerve, that the difference between theſe two Examples con-conſiſts only in the Sixth inſtead of the Fifth *A*, and that the Succeſſion of the Diſcords in one and the other Examples is the ſame, without altering the Modulation.

From this Chord of the extreme ſharp Second, proceeding from the Alteration of the Fifth into the Sixth, ariſes the like Difference

Difference in all the Chords derived from that of the Seventh to a Governing-note of a Key.

If the Leading-note is to carry the Chord of the falſe Fifth, that of the extreme flat Seventh, which happens therein, proceeds from that Alteration, by placing a 7♭ againſt it inſtead of the Sixth *B*.

Likewiſe the flat Third is added to the Chord of the Tritonus, to a Fourth Note inſtead of the Second *C*.

The falſe Fifth is added to the Chord of the great Sixth, to a ſecond Note inſtead of the Fourth *D*.

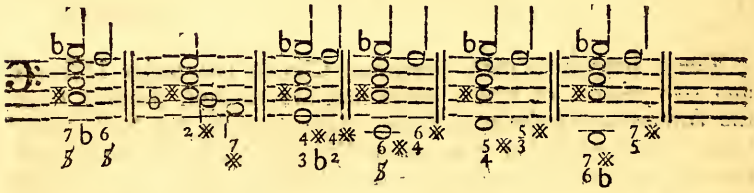
The Fourth is added to the Chord of the extreme ſharp Fifth, to a third Note in Lieu of the Third *F*.

The flat Sixth is added to the Chord of the extreme ſharp Seventh, to a Key-note inſtead of the Fifth *G*.

In order to have a better and clearer Idea of this Difference, you muſt take the four uppermoſt Baſſes, ſo that they may ſerve as Baſſes to each other by Turns, whilſt the other Parts ſerve as Trebles. As to the two lowermoſt Baſſes, it is known that the Chords by Suppoſition, which they carry, hinder them from ſerving as Trebles, each being to be heard ſeparately with the four upper Parts, for they would not have a good Effect together.

You may make the new minor Diſcord to deſcend, in which Caſe the Chord of the Seventh to the Governing-note of the Key ſubſiſts afterwards in all its natural Conſtruction.

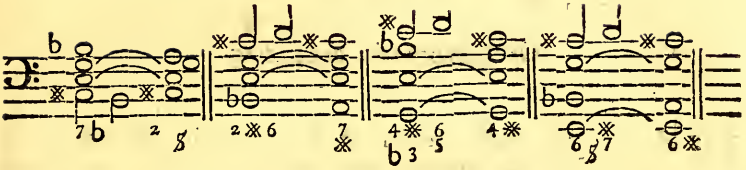
E X A M P L E.



The Leading-note may aſcend in thoſe Chords only that can be inverted, and not in the two laſt which are by Suppoſition; but, having made it to aſcend, it muſt afterwards take its Place in the Chord of the Seventh, to the Fifth of the Key.

EXAM-

E X A M P L E.



All theſe borrowed Chords, and that of the extreme ſharp Fifth, cannot be uſed but in flat Keys, each of theſe Chords having a particular Note affected in the Baſs, which never alters, and which we ſhall more fully explain in Chap. XXXV.

CHAP. XXXIV.

Of Chromatic.

CHromatic conſiſts in a Succeſſion, or Continuation of Melody, that proceeds by Semitones, as well in aſcending as deſcending; which produces a ſurpriſing Effect in Harmony, by reaſon the greateſt Part of theſe Semitones, that are not in a diatonic Order, cauſe at every Inſtant ſome Diſcords that ſuſpend or interrupt a Concluſion, and give a Facility of filling up the Chords with all their Sounds, without altering the diatonic Order of the upper Parts.

Chromatic is chiefly uſed in flat Keys, and is more difficult to comprehend, when the Parts deſcend, than when they aſcend.

ARTI-

ARTICLE I.

Of Chromatic *deſcending.*

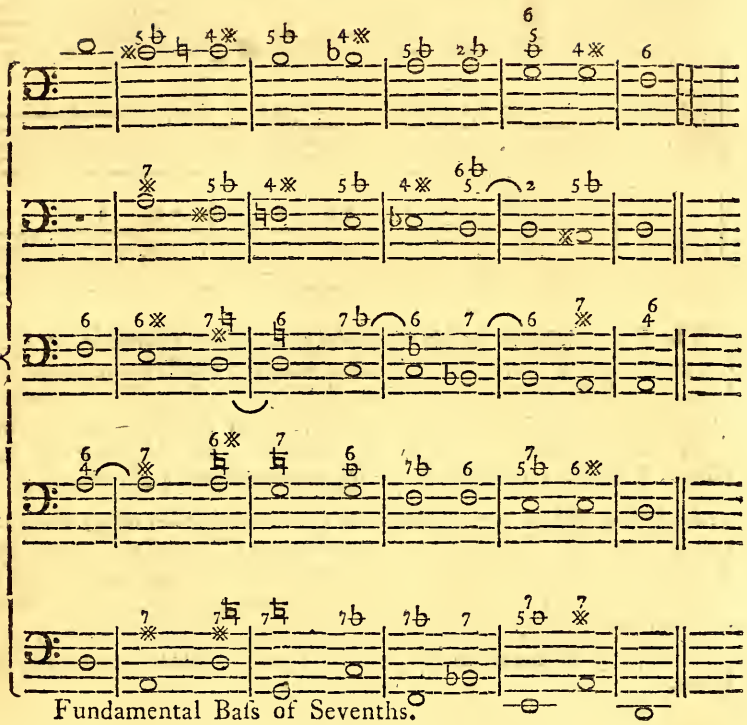
WHEN you have begun in a chromatic Manner in a certain Key, by making any one of the Parts to deſcend by Semitones, you may continue it throughout the Key upon its Governing-note, and more particularly upon its Fourth, the Key-note becoming in this laſt Caſe a Governing-note; and thus, by a Sort of a Chain, each Key-note may become a Governing-note to the Key you remove into; nevertheleſs, you muſt not go too wide of the firſt Key, for, as ſoon as you find Room to return into it, it will be proper to do it.

By Means of the Leading-notes, which become ſucceſſively Governing-notes, you may acquire the Knowledge of Chromatic.

After we have paſſed from the Key-note to its Fifth, we return back again to the Key-note by making it a Governing-note; and thus by following the Rule of Sevenths (ſee Chap. XXI.) and making the upper Parts to proceed by as many Semitones as poſſible (each of theſe Semitones making againſt the fundamental Baſs, the Third, or the Seventh, or ſometimes the falſe Fifth to the Note, which nevertheleſs bears a Chord of the Seventh) you will find that the Difference between the Chromatic and our common Rules conſiſts but in the Leading-note, which in this Caſe may deſcend a Semitone, whereas it ought always to aſcend; but the Note or Sound, to which it ought to aſcend, is always underſtood in the Chord, and it is but in reſpect of the Chromatic only, that we may take this Liberty.

EXAM-

E X A M P L E.

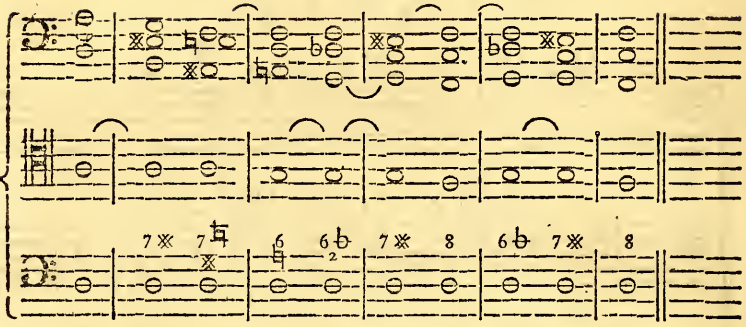


Fundamental Baſs of Sevenths.

If all theſe Parts, excepting the fundamental Baſs, are uſed as Baſſes by Turns, you will find a Succeſſion of Sevenths and Sixes, like thoſe derived from a fundamental Progreſſion of Sevenths, with the Difference of the Chromatic which is therein uſed; you will alſo ſee how the Tritonus and falſe Fifth take the Place of $\frac{2}{5}$ and $\frac{6}{5}$, and how theſe Intervals ſerve for the Reſolution of each other, by Means of the Chromatic; the Leading-note deſcending every-where inſtead of aſcending, ſaving at the End.

Here follows another Manner of practiſing the Chromatic upon a Key, or Holding-note.

E X A M P L E.



The Leading-note being frequently uſed in Chromatic, conſequently you may uſe all the Chords wherein the Diſcord major is heard, as thoſe in the above Example; as alſo that of the extreme ſharp Second, its Derivatives, and eſpecially that of the extreme ſharp Fifth, when you are minded to avoid a Cadence; ſee Chap. XXIX. where the Leading-note deſcends a Semitone.

As you ought at preſent to know the Compoſition of all the extreme ſharp and flat Chords, the borrowed Chords, and thoſe by Suppoſition, you may make Uſe of them, wherever you feel the Leading-note may take Place; nevertheleſs, uſing now and then the perfect Chord, and that of the Seventh and their Derivatives, and keeping as much as may be a diatonic Order in the upper Parts.

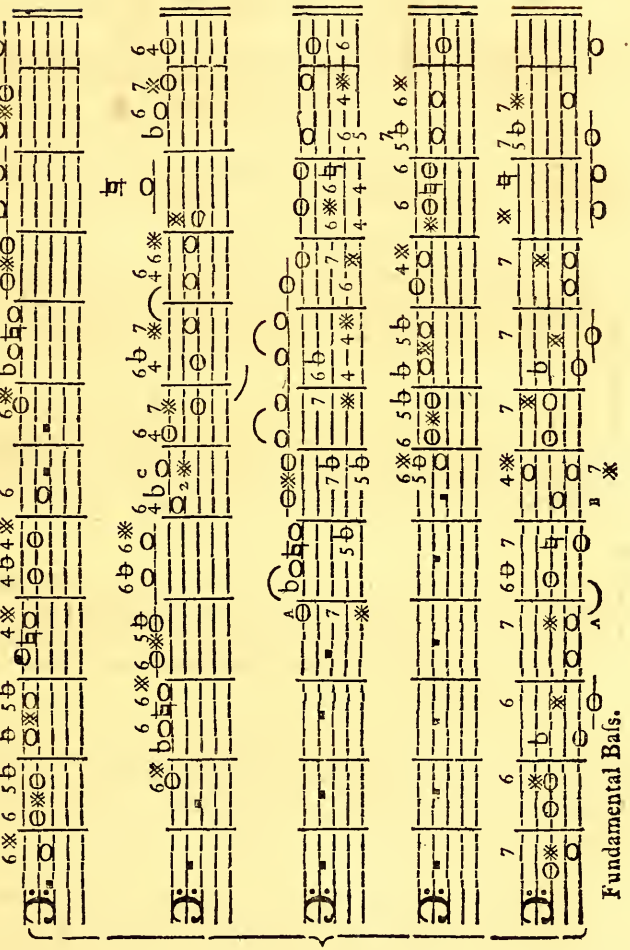
ARTICLE II.

Of Chromatic *aſcending.*

THE Chromatic may alſo be practiſed by aſcending, but then it has not the Sorrowfulneſs of the firſt, and the Harmony it produces, unites itſelf perfectly well with the Fundamental.

E X A M-

EXAMPLE.

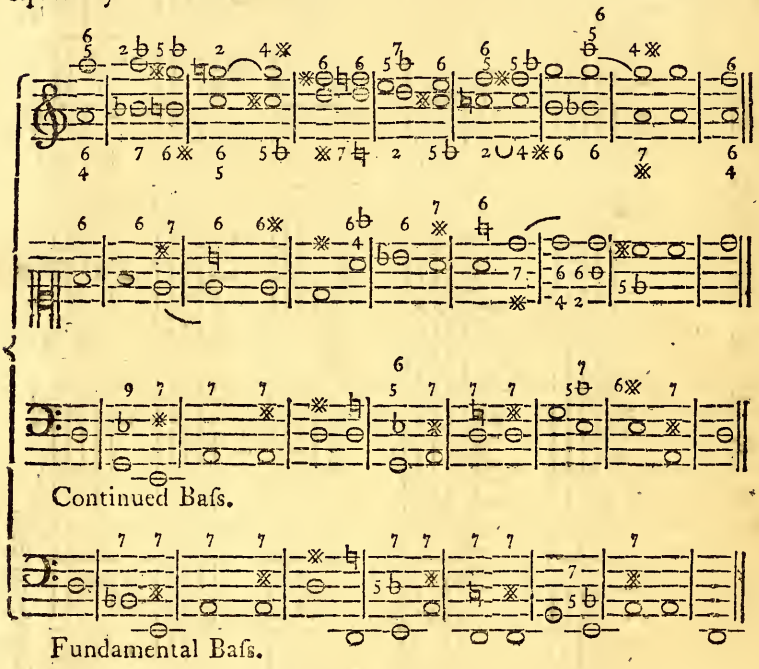


B, this Note, though it be fundamental, cannot take Place, whilſt the Note at *C* borrows from its fundamental Chord *A*, a falſe Cadence.

E X A M P L E.

Of two Parts, aſcending and deſcending at the ſame Time by Semitones.

The three upper Parts may be inverted, and ſerve as Baſſes reciprocally one to the other.



Obſerve that all theſe Semitones that are uſed in Chromatic, conſiſt but in the ſixth and ſeventh Note of the Key, by reaſon that in flat Keys, the Leading-note being to be flattened a Semitone; in order to deſcend; and the ſixth Note to be ſharpened a Semitone, in order to aſcend; we may make thoſe Notes paſs upon one and the other Interval, as well in aſcending as deſcending.

We ſhall add that Chromatic may be practiſed in ſharp Keys, upon the ſharp Third to a Governing-note, which afterwards becomes a Seventh to another Governing-note, by deſcending a Semitone; or elſe by making the fourth Note to aſcend a Semitone upon a Leading-note to a freſh Key.

CHAP.

CHAP. XXXV.

Of the Manner of practiſing all that hath been hitherto ſaid.

ARTICLE I.

Of the Progreſſion of the Baſs.

YOU muſt begin by compoſing a Baſs in a familiar Key, from which you may remove to others equally familiar, according to what we have ſaid at Chap. XXIV. This Baſs is to be filled up with perfect Cadences, as often as may be; for it is the natural Progreſſion of the Baſs to proceed rather by conſonant than diatonic Intervals; the falſe Cadence and the irregular ought not to be uſed until you know how to uſe them properly, either to avoid too frequent perfect Cadences (which is a Variety very proper in this Caſe) or to reſt the Melody or Air upon a Governing-note, or even upon a Key-note, by Means of the irregular Cadence, which is another Variety that keeps the Ear in an agreeable Suſpenſe.

You muſt alſo endeavour to introduce in your Baſs thoſe Progreſſions that create a Continuation of Harmony, derived from that of the different Cadences, according to the Examples we have given, not forgetting the Progreſſions of 7, 7 and 6, 2 and 6, 5♭ and 4♯, 2♯, 9, 11, 5♯, and 7♯.

As ſome Compoſers (being doubtful of their Capacity) will be afraid that their Baſſes are not well compoſed, we ſhall obſerve, that (if they have not that natural Taſte for immediately inventing divers Airs, or Melody, that are always agreeable) they will never err by making the Baſs to proceed indifferently upon all the Notes of a Key, by preferring the ſmalleſt Intervals to the greateſt, that is to ſay, by aſcending a Third, rather than to deſcend a Sixth, *&c.* and remembering that the Leading-note muſt always be followed by the Key-note, excepting in Chromatic; that you muſt make a final Cadence, before you remove into another Key, and proceed in this new Key, pretty near in the ſame Manner, as in the other, and thus from Key to Key, according to the Inſtructions in Chap. XIII. XIV. XV. XVI. XXIV. and XXV.

Again, as the Note that ends the perfect, falſe, or irregular Cadence, is to be heard upon the firſt Note, or Part of the Meaſure or Bar, you muſt compoſe a Baſs in ſuch a Manner, as this Regularity may be therein obſerved; and in caſe at the firſt Cadence it ſhould happen otherwiſe, and that you would not alter the Air of the Baſs, you need only to begin it upon another Part of the Bar, that is to ſay, that, if it was begun by the firſt

Part,

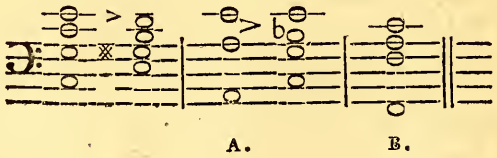
Part, you may begin it by the Second or Third; or, if it was begun by the Second, you need only to begin it by the Firſt, *&c.* and, if this ſhould happen in the middle of a Piece, you muſt then either add or leave out one or two Notes, according as the Caſe is, and obſerving that the Cadences be heard every two or four Bars; though you may treſpaſs upon this Rule when good Taſte directs you, or when you are obliged to it by the Words that you ſet to Muſic, which then are to be our Guide.

ARTICLE II.

How conſonant and diſſonant Chords, Concords, *and* Diſcords *are to be uſed.*

THE perfect Chord is to be uſed at the Beginning and at the Concluſion, and for all middle Cloſes or Cadences; it may alſo be uſed in a diatonic Progreſſion of the Baſs, as well as its Derivatives, which are the Chords of the Sixth, and Six and Four, obſerving in the like Progreſſions, that the conſonant and diſſonant Chords are as it were interweaved one into the other; ſee the Example of the Octave, Chap. XI. and that of the Sixths, Chap. XVI. You muſt alſo contrive it, that all Diſcords be prepared and reſolved according to the Rules, which do not require a great Attention, when you fully poſſeſs the Succeſſion of Chords; beſides, you already know that they ought not to be prepared after a perfect Chord to the Key-note only, or upon its Derivatives, provided that the Key doth not alter; though it might be done when the Baſs aſcends a Third, in order to deſcend a Fifth immediately afterwards.

E X A M P L E.



A. B.

When the Baſs aſcends a Third, in order to deſcend a Fifth, and the Key changes, if the firſt Key be ſharp, that into which you remove is flat *A*; and on the contrary, if the firſt Key is flat, then the Second is ſharp *B*; the Strokes that go from one Note to the other, ſhew how the Diſcord is not prepared, and the Progreſſion of the upper Part in that Caſe ought to follow.

You

You may invert theſe fundamental Progreſſions, and uſe them with Diſcretion.

You ought not as yet to alter the diatonic Order of the upper Parts, unleſs it be for the better completing a Chord, or for replacing a Part above the Baſs, or in its natural Place; and you muſt in this Caſe avoid uſing two Octaves, or two Fifths, together, unleſs they be reverſed.

Thoſe Parts that aſcend or deſcend together, are to be diſpoſed by Thirds or Sixes, and as little as may be by Fourths, never by the Octave or Fifth; that is to ſay, whatever Parts make together a Third, or a Sixth, may make the like again in the following Chord, and ſo on.

When one Part aſcends or deſcends diatonically, whilſt another proceeds by a conſonant Interval, that is always good, until we give a fuller Explanation.

Remember, that the Succeſſion of Chords contained in a Key is the ſame in all other Keys.

ARTICLE III.

Of major Diſcords *proceeding from the* Leading-note, *and of thoſe* Notes *on which they are uſed.*

1. THE Tritonus is never uſed but upon the fourth Note, when that Note deſcends upon the Third, or upon the Key-note.

2. The falſe Fifth is never uſed but upon the Leading-note, or ſharp Seventh, when that Note afterwards aſcends to the Key-note, or ſometimes to its Third.

3. The ſmall ſixth Major is never uſed but upon the ſecond Note of the Key; and, when it is Minor, then it is generally uſed upon the ſixth Note.

4. The ſharp Third cannot be uſed with the Seventh, making between themſelves an Interval of a Tritonus, or a falſe Fifth, but upon the Governing-note or Fifth of the Key. Theſe four Diſcords are the moſt in Uſe.

5. The extreme ſharp Seventh is never uſed but upon the Key-note, which continues upon the ſame Degree, in order to prepare and reſolve this Diſcord.

6. The extreme ſharp Fifth is never uſed but upon the Third in flat Keys.

7. The extreme ſharp Second is never uſed but only upon the ſixth Note in flat Keys, and this Note muſt afterwards deſcend.

8. The

8. The extreme flat Seventh is never uſed but upon the Leading-note, or ſharp Seventh, after which this Note is to aſcend.

9. The other Diſcords that derive from theſe two laſt, are uſed upon the ſame Notes, wherein the Chords differ from the Governing-note to the Sixth in flat Keys only.

Sometimes the Tritonus happens upon another Note than the Fourth, and the falſe Fifth upon another Note than the Leading-note; but then, and in that Caſe, thoſe Intervals are no longer the Object of the Chord, they ſerving only as an Accompaniment; and it is the Modulation that cauſes that Alteration in the ſame Manner, as in the Progreſſion of Sevenths, where ſome are altered, and are not in their true and juſt Proportion; therefore you muſt never take any Notice of this Alteration, when you know the Chord that ought to be uſed, and the Key you are in; for it is the ſucceſſive Degrees of a natural Voice, contained in the Compaſs of the Octave of the Key, or Mode that you are in, that decides the Juſtneſs, or the Alteration of an Interval that makes a Part of the Chord.

ARTICLE IV.

Of minor Diſcords.

1. THE eleventh Heteroclite, otherwiſe called the Fourth, may be uſed upon all ſuch Notes as bear the perfect Chord, or the Seventh, provided that theſe laſt do immediately follow, ſaving out of this Rule the firſt and laſt Note of a Piece; and in this Manner it will always be found prepared by obſerving two Things.

Firſt, That if you fall upon a perfect Chord, after one of its Derivatives, theſe two Chords being but the ſame, the Eleventh cannot then be heard.

The Second is, To give always the Sixth to the Note that aſcends a Third upon that on which you take the Eleventh.

2. The Seventh, where the Diſcord major is not heard, chuſes to be prepared by the Octave, by the Fifth, by the Sixth, by the Third, and even by the Fourth, which is a Concord, or a conſonant Note, proceeding from the Chord of the Sixth and Fourth to a Governing-note of a Key, according to the different Progreſſions of the Baſs.

3. The Ninth muſt always be prepared by the Third, or by the Fifth, according to the Progreſſion of the Baſs; it may alſo be prepared by the falſe Fifth.

4. The

4. The Eleventh muſt likewiſe be prepared by the Fifth, and ſometimes by the Seventh, but this ſparingly; when it is heteroclite, it may be prepared by all the Concords, or conſonant Notes, and even by the Seventh, and by the falſe Fifth.

5. The Second which is prepared in the Baſs, may be preceded in the Treble by any one of the Concords, whilſt the Baſs remains upon the ſame Degree.

To conclude, all Diſcords are to be reſolved, as hath been ſaid; you may leave out of the diſſonant Chords one of the two Sounds that create between themſelves the Diſcord, and only take the perfect Chord, or one of its Derivatives.

ARTICLE V.

Of thoſe Concords, *or* conſonant Notes, *that are to be preferred, when they are to be doubled.*

WE have only to take the Conſonants in their Order of Perfection, thus, the Octave, the Fifth, the Fourth, the Third, and the Sixth, in order to know that the Octave is to be preferred to the Fifth, and ſo on; obſerving that it is already a Replicate, and that, in the conſonant Chord of the Sixth, the Octave to the Third, or to the Sixth, is as proper, and as good, as that of the Baſs.

ARTICLE VI.

Of Meaſure, *or* Time.

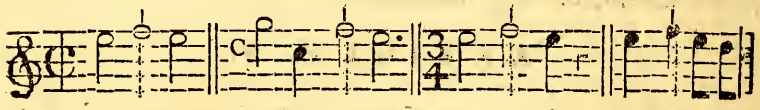
MUSICK without a Movement loſes all its Grace; therefore it is not enough to apply to the Compoſition of Chords only, but you muſt alſo endeavour to give to each Part a certain Movement, wherein may be diſtinguiſhed a Cæſure, a Section, a Cadence, a Syllable, of the Length of a Breve, and the Places where the Diſcord is to be uſed; the Whole to be made ſenſible and obſervable, immediately upon the firſt Part of the Bar (ſee Chap. I.)

ARTICLE VII.

Of Syncopation, *or of a Driving-note.*

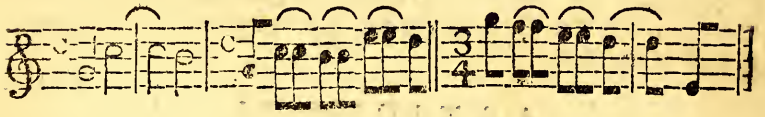
IN order to follow the natural Order of the Meaſure, it muſt be ſo contrived, that the Value of each Note do begin and

end, within the Space of each Part or Diviſion of the Bar; yet a Note that begins immediately upon the accented Part of the Bar, may remain upon the ſame Degree, as long as Taſte will permit, whether the Sound be laſting or not; but as ſoon as a Note begins upon the unaccented Part of the Bar, and one half of its Value is heard upon the firſt Part or Diviſion of the next Bar, that cauſes a Shock to the Ear, and, in that Caſe, that Note is ſaid to be ſyncoped, and is called a Driving-note. And there are four ſeveral Ways of uſing it; the firſt Way is when the Note is divided by the Bar into two equal Parts, thus,



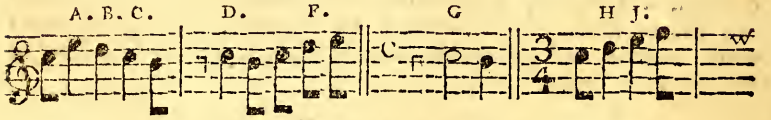
The ſecond Way is, when two Notes together of an equal Value, and upon the ſame Space or Degree, are bound by a Semicircle thus ⁀, or ⁔, which ſhews that the Sound of thoſe two Notes is to be laſting.

E X A M P L E.



The third Way is when a Note is preceded by another, which is but of the Value of a Moiety, or half of one Part of the Bar, or when it is preceded by a Character which denotes a Reſt of the like Value, ſuppoſing that this Note ſo preceded anticipates upon the next following Part of the Bar.

E X A M P L E.

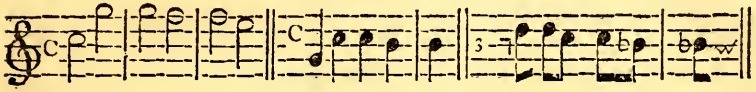


The Notes *A*, *B*, *C*, *D*, *F*, *G*, *H*, *J*, are ſyncoped.

The fourth Way is when two Notes are repeated on the ſame Degree of an equal Value, the firſt whereof begins upon the unaccented Part of the Bar, and the ſecond upon the accented Part, without

without binding them, whether it be for the Sake of the Words, or for giving a quicker Movement to the air.

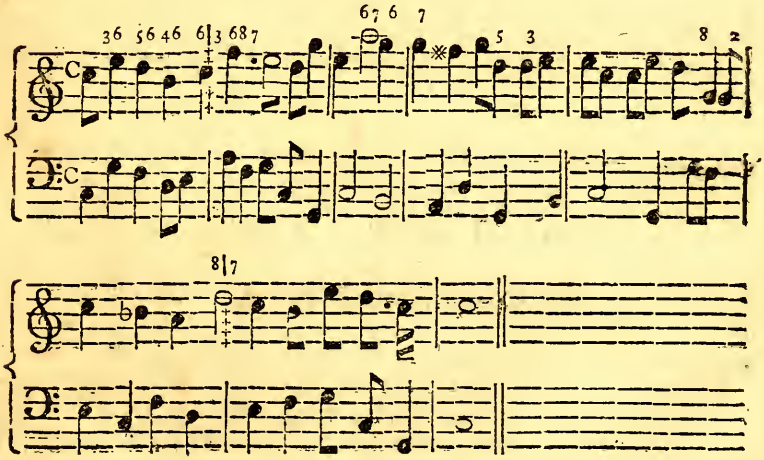
E X A M P L E.



In order that a Note be ſyncoped, it muſt not only begin on the unaccented Part of the Bar, or upon the ſecond Half of the firſt Diviſion; but it muſt alſo be contrived, that its Value may be divided into two equal Parts, the one in the firſt Part of the Bar, and the other in the next following; and, inſtead of making Uſe but of one Note, you may make Uſe of two Notes, each repreſenting one Half, or Moiety of the Note ſyncoped, being at Liberty to repeat them, or to continue the Sound, by binding them with a Semicircle, or Slur, which cauſes them to be expreſſed as one Note, the Value of which will be equal to thoſe two Notes.

Theſe are the various Ways of Syncopation, and are uſed as well in Harmony as in Melody: in Harmony, by cauſing the Diſcords to be prepared; and in Melody, in order to render the Air more expreſſive, without altering the Species of the Interval, in one or the other Note of the Syncope, or in the ſame Note ſo ſyncoped.

E X A M P L E,



The Figures that denote Concords or Conſonant Notes only, thus, 3, 6, &c. ſhew that the Syncope is uſed for the ſake of the Melody or Air only; and thoſe that denote a Diſcord, ſhew that the Syncope is uſed for Harmony.

The Baſs may ſyncope as well as the Treble, together, or ſeparately, in reſpect to Melody; but, as to Harmony, the Baſs cannot ſyncope but in the Chords of the Second, of the Tritonus, and of the extreme ſharp Seventh.

In order that the Syncope be ſtrictly obſerved in Harmony, it muſt be contrived that the Value of the Note or Concord that prepares and reſolves, and the Diſcord prepared, be equal, as much as can be; this ſuffers an Exception but in Triple Time, where the two laſt Parts or Diviſions of the Bar are unaccented, ſo that the Concord which prepares and reſolves the Diſcord, may, in that Caſe, contain double or one half of the Value of the Diſcord prepared.

When there happen ſeveral Diſcords together, it is but the Firſt that is ſubject to the Rule of being prepared on the unaccented Part of the Bar, and to be heard on the accented Part.

In Common Time, where there are two equal Notes in a Bar, the Firſt is accented, and the Second is unaccented; and, when there are four Parts or Notes in a Bar, the Firſt and the Third are accented, and the Second and the Fourth are unaccented.

In Triple Time, where there are three Parts or Notes in a Bar, the Firſt only of the three is accented, and the other Two are unaccented.

As ſoon as a Diſcord can be prepared, the Syncope no longer ſubſiſts, and then a diatonick Progreſſion from the Concord that precedes the Diſcord, until the Concord that reſolves it, ought to be followed; though this is not to ſerve as a general Rule, eſpecially in regard to the Seventh, the falſe Fifth, and all major Diſcords.

CHAP. XXXVI.

Of Compoſition *in two Parts.*

THE leſs the Parts are in a Piece of Muſic, the ſtricter are the Rules to be obſerved; ſo that certain Licences allowed in four Parts may become Faults, when the Parts are leſſened.

1. We muſt now diſtinguiſh the conſonant Notes, or Concords, in perfect and imperfect.

The

The perfect Concords are the Octave and the Fifth, it not being herein permitted to make two Octaves, or two Fifths, together, even though they ſhould be reverſed.

The Fourth is alſo a perfect Concord, but, as it is but ſeldom uſed in a Compoſition of two Parts, we ſhall only preſcribe the Manner how it may be uſed.

The imperfect Concords are the Third and Sixth, and we may uſe ſeveral of them together and intermix them without any Fear of being miſtaken, provided that we do not go out of true Modulation.

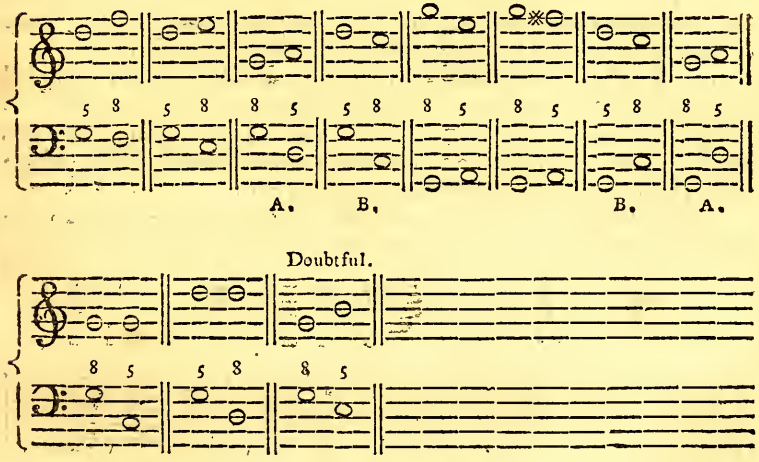
If we ſkip from a Third to a Sixth, or from a Sixth to a Third, and the Progreſſion of the Parts is conſonant, then the Parts ought to move in a contrary Direction, the one aſcending at the ſame Time that the other deſcends.

It is proper to ſkip, as much as may be, from a perfect Concord to an imperfect, and *vice verſa*.

One cannot well ſkip from a perfect Concord to an imperfect and *vice verſa*, but when one of the Parts proceeds diatonically, and the other by a conſonant Interval; and, in that Caſe, it is very proper that the contrary Motion be obſerved.

E X A M P L E.

Of a Sequence, *or Succeſſion of perfect* Concords.



All other Progreſſions of two perfect Concords immediately following are not proper.

Thoſe Bars marked with the Letter *A* are alike, as well as thoſe with a *B*.

2. You

2. You may make a Part to move by as many conſonant Intervals as you think proper, whilſt the other Part remains upon the ſame Degree, provided there be a Concordance between the two Parts.

3. All Paſſages or Skips from the Octave to the Third, from the Fifth to the Third and to the Sixth, from the Sixth to the Third, and from the Third to the Sixth, are proper.

4. The Paſſages or Skips from the Octave to the Fifth are proper, provided that the contrary Motion be obſerved; yet that, where the Baſs deſcends diatonically, is not proper.

5. Thoſe of the Octave to the Fifth are proper, provided that the Progreſſion of the Parts be contrary, when the Parts make each a conſonant Interval, though all is proper, when the Baſs deſcends a Third.

6. Thoſe of the Sixth to the Octave are proper, excepting when the Baſs aſcends diatonically, when the upper Part deſcends in the like Manner, or when each of the Parts makes a conſonant Interval.

7. Thoſe of the Sixth to the Fifth are proper, excepting when the upper Part aſcends diatonically, when the Baſs deſcends in the like Manner, or when each Part makes a conſonant Interval.

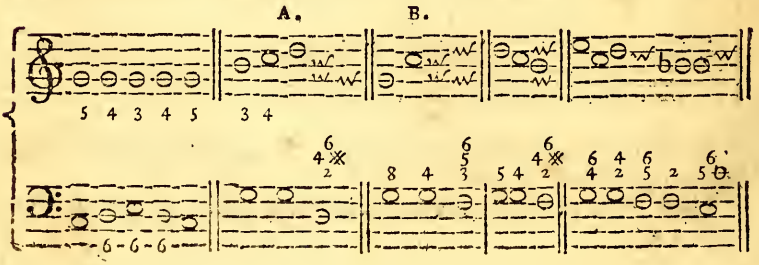
8. Thoſe of the Fifth to the Octave are proper, excepting when the Baſs aſcends diatonically, or when each of the Parts makes a conſonant Interval.

9. Thoſe of the Third to the Octave are proper, excepting when the Baſs deſcends diatonically, and obſerving, at the ſame Time, a contrary Direction, when the Baſs aſcends a Fifth.

10. Thoſe of the Third to the Fifth are alſo proper, provided that the Parts move by a contrary Direction at thoſe Places where the Baſs aſcends a Second, a Third, and a Fourth; and even one muſt rather make it aſcend a Fourth than deſcend a Fifth, otherwiſe the Progreſſion would not be proper.

11. As to the Fourth, here follows an Example of all the Concords that may precede or follow it.

E X A M P L E.



The

The Guides ſhew the ſeveral Concords, and even the Diſcords that may follow the Fourth; the Figures that are between the Parts ſhew the like; and thoſe under and over the Baſs ſhew the Chords to be uſed in this Caſe.

Take Notice, that the Guides, in the Examples *A* and *B*, denote two different Chords; that of the Tritonus, or that of the great Sixth; the one cannot be uſed, whilſt the other takes Place.

All other Progreſſions than thoſe we have preſcribed, are not proper, and obſerve that they are grounded upon the Preference that ought naturally to be given to the ſmalleſt Intervals; that is to ſay, that as to aſcend a Sixth, or deſcend a Third, is the ſame Thing; the Progreſſion of a Third deſcending ought to be preferred; ſo of the other Progreſſions that bear a like Relation, excepting when Taſte requires the contrary, to ſuch Paſſages where you find that our Rules are not to be infringed.

Theſe Rules will equally hold good for all Keys, whether the Third, or the Sixth, be flat or ſharp.

The other Rules that concern four Parts, as well in reſpect to the natural Progreſſion of ſharp and flat Thirds, as of Diſcords, are to be equally obſerved.

When once a Knowledge of true Modulation hath been attained to, all theſe Rules are naturally obſerved, without burthening the Memory, or Mind.

CHAP. XXXVII.

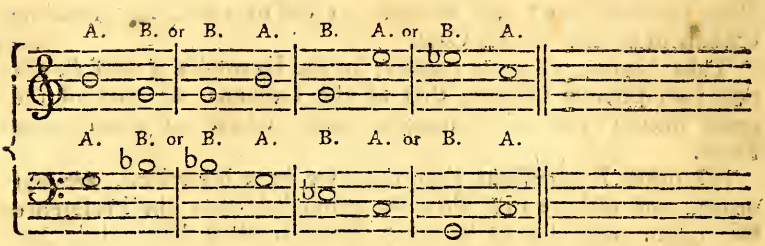
Of falſe Relations.

IN order to avoid falſe Relations in the Progreſſion of a ſingle Part, you need only to make it proceed by diatonic or conſonant Intervals, thoſe of the falſe Fifth, the extreme flat Seventh, and the extreme flat Fourth, being permitted and allowed in deſcending, but not aſcending; yet, true Modulation being obſerved, we may make Uſe of all the known Intervals, provided they do not exceed the Compaſs of the Octave, nevertheleſs with a little more Circumſpection, in regard to thoſe that we have not named, than to the others; ſome Authors make Uſe of the extreme flat Third in deſcending, as from *E*♭, to *C*𝄪, which is left to the Diſcretion of Compoſers.

As to falſe Relations between two Parts, you can hardly fall into that Error, when you are thorough Maſter of Modulation.

EXAM-

E X A M P L E.



You ſee by this Example, that the Notes at *A* repreſent a ſharp Key, and that the Notes at *B* repreſent a flat Key; ſo that you cannot modulate in one Key half Major and half Minor, nor go from the Major to the Minor upon the ſame Key-note, but after a perfect Cadence, and even this is not to be done without Judgment; ſo that true Modulation puts us above theſe Rules, which are almoſt uſeleſs, when we have attained to a perfect Knowledge of it.

CHAP. XXXVIII.

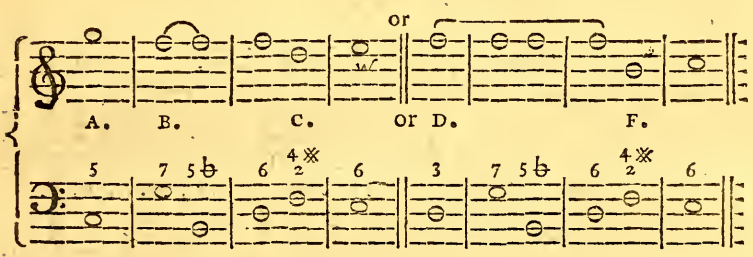
Of the Manner of compoſing a Treble, *or an Air to a* Baſs.

IN order to compoſe a Treble or an Air to a Baſs, you muſt at firſt only compoſe it in that Key that you know the Modulation of; and when you alſo know the Succeſſion of Concords and Diſcords (the Manner of preparing and reſolving which hath been fully explained) it will not be difficult to compoſe, without any Fault, a Treble, or an Air over a Baſs.

Nevertheleſs, in order to give a greater Scope to one's Genius, when you know the Chord that each Note is to bear, you may chuſe one of the Sounds in each Chord, in order to compoſe an Air or a Treble at your Pleaſure. Thus in the perfect Chord, you may chuſe the Third, the Fifth, or the Octave; and, in that of the Seventh, you may chuſe it among the others, if you can, for you cannot chuſe the Seventh, unleſs it be prepared, excepting when the Baſs aſcends a Third, or a Fifth, whilſt the Treble deſcends diatonically, or aſcends and deſcends afterwards in a diatonic Manner (ſee the Example at Chap. XIX.) If even the Seventh could not be reſolved by deſcending diatonically upon a Concord to the next following Chord, you muſt either not uſe it, or alter the Baſs, except you find that the Notes of the Baſs belonged

belonged to the Chord of that Seventh, and a Note followed afterwards, whereby that Seventh could be reſolved; and in that Caſe the Seventh before its Reſolution always remains upon the ſame Degree, provided that one of thoſe Notes contained in the ſame Chord, and which is found in the Continuation of the Baſs, doth not make an Octave with that Seventh, for otherwiſe you would be obliged to make the Seventh deſcend a Third; and, making this laſt Note afterwards to aſcend upon the Concord that ought naturally to follow that Seventh, one might alſo, in the like Caſe, make the Seventh to fall upon the Leading-note, ſuppoſing that this Leading-note be a Part of the ſame Chord, ſo that that Note on which we may deſcend a Third after the Seventh, will make the Sixth to that which in the Baſs will make the Octave to that Seventh, and the Leading-note will then make the Tritonus.

E X A M P L E.



A, I begin by the Fifth, though I might have begun by the Octave, or by the Third; but it is better to begin in this Manin order that the Seventh may be heard unprepared, as we have juſt now ſaid.

B, the Seventh, remains upon the ſame Degree until *C*, where its Octave appears in the Baſs; and in that Caſe I make it deſcend a Third, in order afterwards to aſcend upon the Concord that ought naturally to have reſolved it, though, abſolutely ſpeaking, I might have made it to deſcend upon the Guide *w*.

D, the Seventh, is here prepared by the Third, and remains until *F*, where its Octave appears in the Baſs; and in that Caſe I can make it deſcend upon the Leading-note *F*, which is a Part of the ſame Chord.

It is eaſily perceived that a Seventh may remain upon the ſame Degree, whilſt the Baſs makes divers Intervals, becauſe thoſe Intervals muſt make the Third, the Fifth, the falſe Fifth, or the Octave to that Seventh; or that the Seventh makes the Third, the Fifth, or the falſe Fifth to one of thoſe Notes on the

Baſs. The ſame Thing may be obſerved in all the other Diſcords, if you reduce them to their fundamental Note; if not, as the Bounds and Limits of the Progreſſion of Concords and Diſcords are known, you cannot be miſtaken.

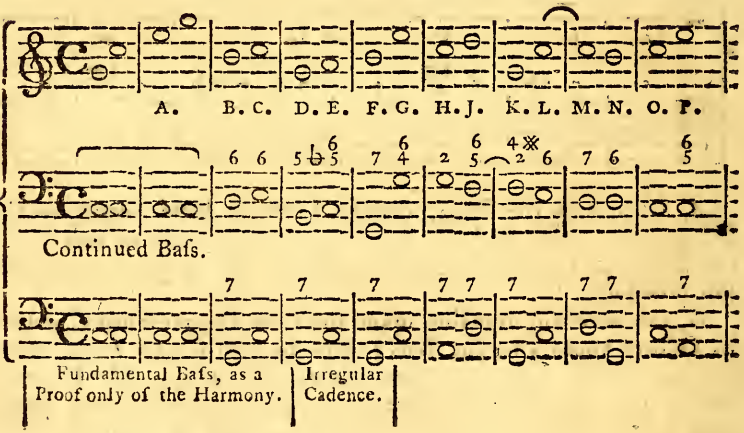
If a Note may remain upon the ſame Degree in the Treble, whilſt the Baſs proceeds through all the Intervals contained in the ſame Chord, as we have juſt now ſhewn it; ſo likewiſe a Note in the Baſs may remain upon the ſame Degree, whilſt the Treble goes through all the Intervals contained in the Chord to that ſame Note in the Baſs.

If the ſame Note in the Baſs can carry different Chords, and the Third, the Fifth, the Sixth, *&c.* be found in each Chord, we may cauſe them to be heard indifferently in one or the other Chord.

When you compoſe only in two Parts, the Treble ought always to end by the Octave, ſeldom by the Third, and never by the Fifth.

Here follows a general Example.

General EXAMPLE.



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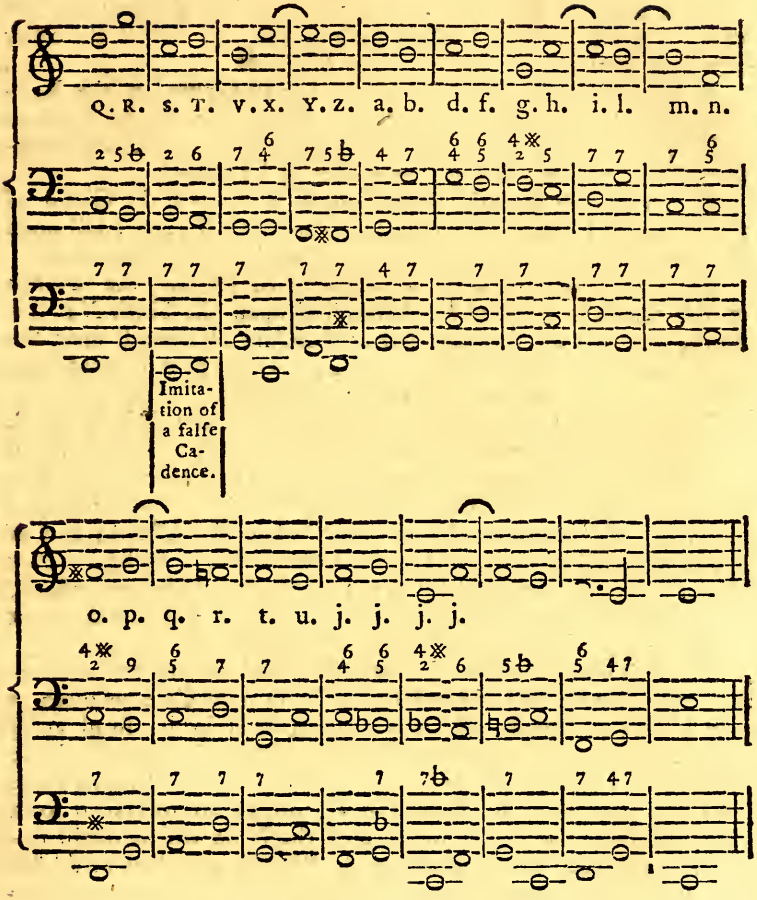


The upper Part, which we have compoſed only to the continued Baſs, is full of Faults with reſpect to the fundamental Baſs; not that they are Faults againſt the fundamental Harmony, but only in reſpect to the Progreſſion of the Parts; the fundamental Baſs having been put only as a Proof of the perfect Harmony, and from which are choſen thoſe Notes that are proper and ſuitable to the Air.

A, I ſkip at Pleaſure through all the Notes of the Chord: From the Fifth, I go to the Sixth *B*, though I might have kept upon the Fourth without altering the Fifth that precedes, by rea-

ſon that this Fourth is a Part of the Chord of the ſmall Sixth *B*: I could have gone alſo to the Third.

B, *C*, *D*, *E*, I take four Sixths following, becauſe they are Part of the Chords, though I might have choſen any one of the other Intervals contained in each of thoſe Chords.

F, *G*, inſtead of going from the Leading-note to the Key-note, I go to its Third, becauſe that is not againſt the Rules of conſonant Progreſſion; and, at the ſame Time, that Third repreſents the Key-note, and makes a Part of its Chord.

H, I take the Fourth, which makes a Part of the Chord of the Second: I proceed afterwards to the Sixth *J*, and I fall upon the Second, which is a Part of the Chord of the Tritonus *K*.

The Sixth, which I afterwards take at *L*, prepares the Seventh at *M*, which is reſolved by deſcending upon the Sixth *N*; this Sixth, which is the Leading-note, aſcending afterwards upon the Key-note *O*: I afterwards proceed upon the Third to that ſame Key-note *P*, in order to prepare the Second *Q*.

The Seconds that are prepared and reſolved in the Baſs *P*, *Q*, *R*, *S*, *T*, are preceded in the Treble by the Third at *P*, and by the Sixth at *R*; they might equally have been preceded by the Octave, the Fifth, or the Fourth, becauſe the Second may be preceded and followed by any of the conſonant Notes contained in the Chord; and at *T* you will find it followed by the Fourth, which makes a Part of the Chord of the ſmall Sixth; though it is to be underſtood, in the like Caſe, that the limited Progreſſion of the Baſs doth not alter.

As the Third is the moſt proper Concord to prepare and reſolve the Second, it is proper to uſe it in that Caſe, as often as may be: The Fourth, which we have placed in its ſtead at *T*, and which creates a Diſcord with it, being to fall upon the Note which that Third ought to have deſcended, if it had taken Place with that Fourth, as we ſhew it at *V*; for we are to take it for a general Rule, that when, in Lieu of the Note which ought naturally to reſolve the Diſcord in the Treble, we place or ſubſtitute, in its Stead, another Note that makes with it a Seventh or a Second; in that Caſe we muſt make that Note, ſo ſubſtituted, to proceed upon the Note that ought to have followed that Note which doth not appear, and which would have made a minor Diſcord with the Note ſubſtituted; which may happen in the Chord of the ſmall Sixth, between the Third and the Fourth; and in thoſe of the great Sixth and falſe Fifth, between the Fifth and the Sixth; ſo that if, in thoſe Chords, the Third or the Fifth is uſed, in order to reſolve the Diſcord, and if they are afterwards to deſcend diatonically, conſequently, the Fourth or the Sixth, which are the Notes ſubſtituted, are to paſs to or fall upon

upon thoſe Notes that ought naturally to have followed the Third, or that Fifth.

You will find in the other Parts of the Example a Connection of all that we have ſaid, obſerving that the Key changes at *m*, at which Place we give the Seventh to the Key-note, inſtead of making its Leading-note to aſcend upon its Octave, which then becomes its Seventh; this Key-note becoming a fourth Note, by the Chords of the great Sixth and of the Tritonus, at *n* and *o*; after which we return into the Key of *C* at *J*, by Means of the conſonant Progreſſion of the Baſs which ends at *V*, and by which we know that the Key-note is *C*; and which obliges us to prepare this Key by leaving out the Sharp to *F*, after which the Flat againſt the Note *B*, in the continued Baſs, denotes the Key of *F*; and afterwards the Key of *C* is denoted by the ♮ Natural placed againſt the Note *B*.

Theſe Obſervations, in reſpect to the continued Baſs, may more clearly appear by comparing, one after another, the upper Part and the continued Baſs, with the fundamental Baſs; where you will find that out of each perfect Chord, or of the Seventh, which the fundamental Baſs bears, the Third, the Fifth, the Octave, or the Seventh is choſen for the continued Baſs, and for the upper Part, by giving to thoſe two Parts a Progreſſion according to our foregoing Rules. Obſerve, that when the Progreſſion of the continued Baſs is diatonic, as between *G*, *H*, *J*, *K*, *L*, &c. the upper Part is often like unto that of the fundamental Baſs: From hence we conclude, that the conſonant Progreſſion of one Part oftentimes obliges the other to follow a diatonic Progreſſion, in like Manner that a diatonic Progreſſion of one Part often obliges the other to follow a conſonant Progreſſion.

CHAP. XXXIX.

Of figurative Melody, or of Suppoſition and paſſing Notes.

WE call figurative Melody what hath been hitherto called Suppoſition; and herein conſiſt the Rules of this figurative Melody.

It being of an abſolute Neceſſity that a Perfection of the Harmony be heard and manifeſted upon every Part of the Meaſure or Bar, we may, between one Part of the Bar and the next, paſs as many Notes as Fancy and taſte will permit.

ARTICLE

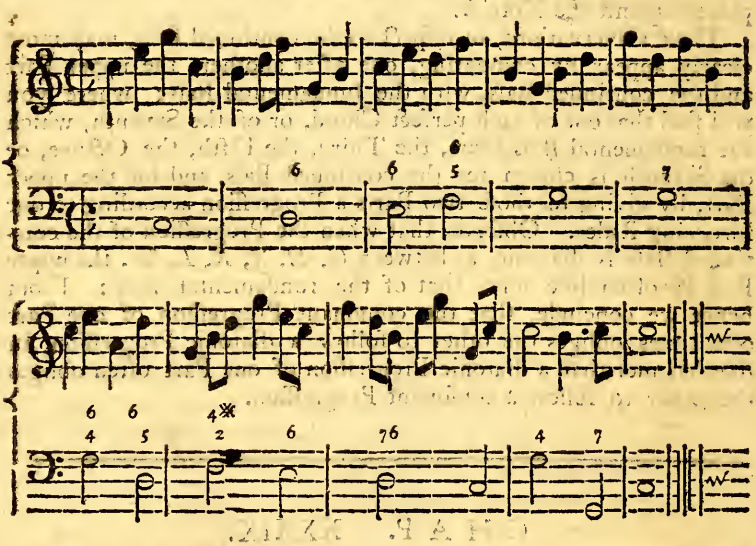
ARTICLE I.

Of figurative Melody by conſonant Intervals.

IN order to paſs ſeveral Notes between each Part of the Bar by conſonant Intervals, we can make Uſe but of thoſe Notes that are compriſed in the Chord to the firſt Part of the Bar, in order to fall afterwards upon a Note of the Chord to the next Part of the Bar, and ſo on.

EXAMPLE

Of a figurative Treble.

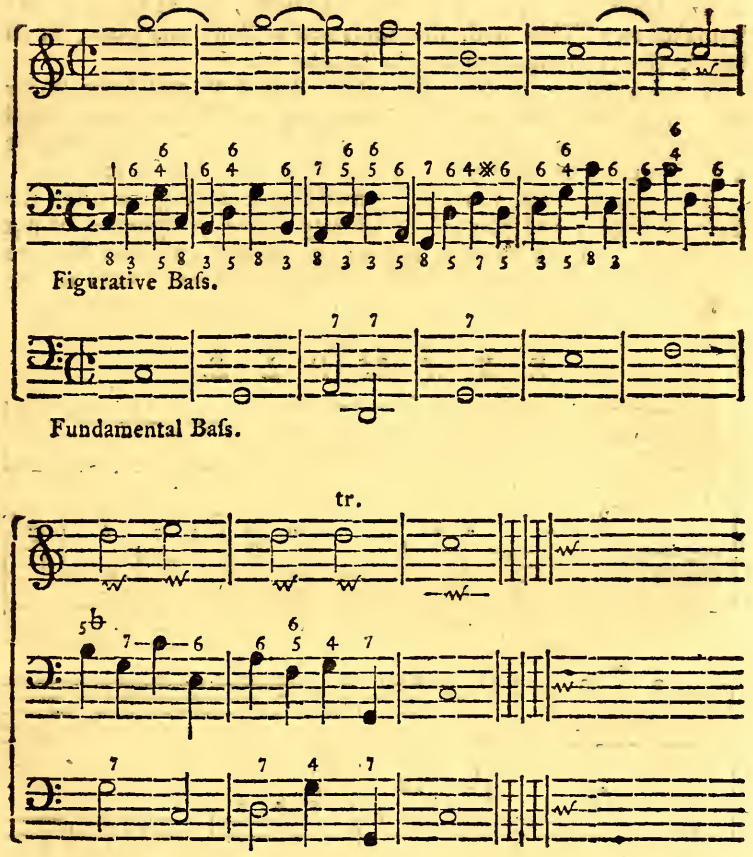


You ſee in the Treble that all the Notes paſs upon thoſe Sounds that are ſuitable to the Chord figured in the Baſs.

EXAM-

E X A M P L E

Of a figurative Baſs.



The Figures that are under the Notes of the figurative Baſs, ſhew the Intervals they make with the fundamental Baſs; and thoſe that are over, ſhew the Chords that thoſe Notes bear in the like Caſe.

In order to make a figurative Baſs, you may begin by compoſing only a fundamental Baſs, over which you will compoſe a figurative Baſs pretty near in the ſame Manner as a figurative Treble, obſerving to uſe as much as may be the fundamental Sounds of the fundamental Baſs, eſpecially in the firſt Part of the Bar.

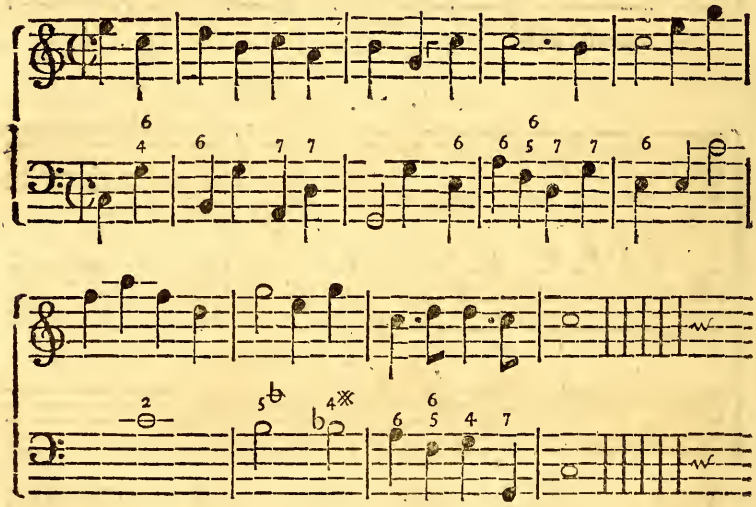
You

You muſt always make the upper Part to agree with that which is to be heard with it; and, if this upper Part was to be heard with the two Baſſes, it muſt in that Caſe be compoſed according to the Rules, in reſpect to one and the other of thoſe Baſſes; and, in that Caſe, the upper Part ought to be altered at *C*, *D*, where it makes two Fifths with the fundamental Baſs, and place, in its Stead, the Notes marked by the Guides ∿.

You may alſo compoſe a figurative Baſs firſt, and place under it a fundamental Baſs intirely, according to the Rules preſcribed for the Progreſſion of this laſt Baſs; afterwards you may compoſe a Treble more or leſs figurative than that ſame figurative Baſs.

You muſt ſeek for Variety, by avoiding repeating too often the ſame Paſſages; and you are at Liberty either to figurate, or not to figurate, all the Parts of a Bar; ſometimes you may figurate only one Half, ſometimes in the Baſs, at other Times in the Treble, or both together according to the Rules.

E X A M P L E.



You may make one of the Parts to begin firſt, either for a Half, or three Fourths of a Bar, even for one or two Bars; ſo of the other Parts, in Caſe there be more than two.

You may begin by whatever Part of the Bar you think proper, and you may cauſe one of the Parts to reſt for a While; but, if it ſhould be the Baſs, it can be but for a Bar or two at moſt, for the continued Baſs muſt always be underſtood, though you ſhould be willing that one Part only ſhould be heard.

A Dot placed after a Note is to be deemed as the ſame Note, and is generally concordant with the other Parts, by reaſon of its being commonly uſed upon the accented Part of the Bar.

ARTICLE II.

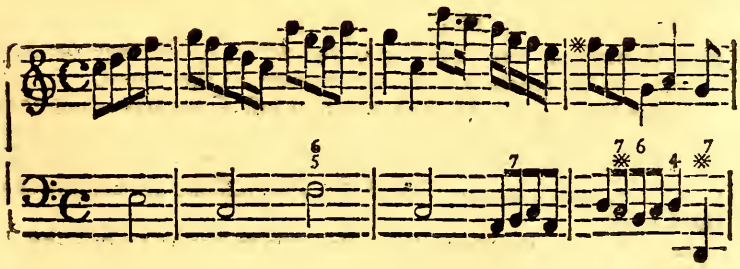
Of figurative Melody by diatonic Intervals.

YOU may paſs as many Notes as you pleaſe between each Part of the Meaſure or Bar, and, if they proceed by diatonic Intervals, it matters not whether they be of thoſe compriſed in the Chord, provided that the firſt be one of the Notes of the Chord; but if, after ſeveral Notes in a like Progreſſion, you ſhould proceed by a conſonant Interval from the laſt Note to the firſt Note of the ſubſequent Part of the Bar, then this laſt Note muſt alſo be compriſed in the Chord.

If the Parts of the Bar be of a ſlow Movement, ſo that they may be divided into two equal Parts, you will always do well to divide theſe paſſing Notes into an equal Value, obſerving that the firſt Note of each Diviſion, or Part of the Bar, be of thoſe compriſed in the Chord.

Taſte obliges us ſometimes to deviate from this Rule in reſpect that, in a diatonic Progreſſion, the firſt Note of the Diviſion, or Part of the Bar, is not always compriſed in the Chord that ought to be heard; but you may obſerve that this firſt Note is only then admitted as a paſſing Note to the very next, which makes a Part of the Chord, before its Time or Value is expired.

E X A M P L E



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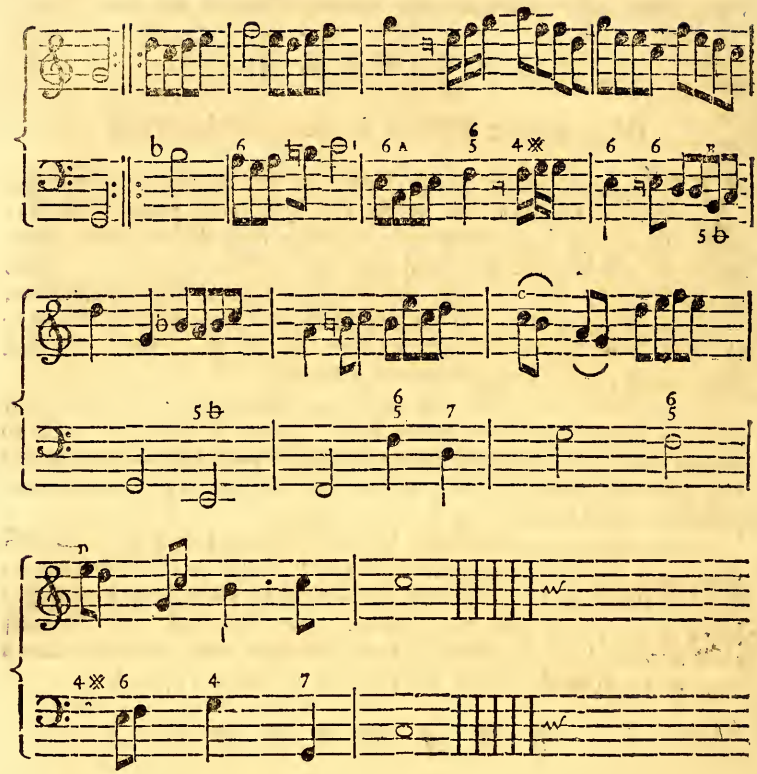


This Meaſure, or Time, though in two Parts, is divided almoſt throughout into four Parts, and you may ſee that the Firſt of the two Crotchets is always compriſed in the Chord.

In the Part *A*, the Firſt of the two laſt Crotchets is not compriſed in the Chord, by reaſon that the Melody proceeds diatonically from one Part of the Bar to the other, and the two firſt Crotchets, which do not follow this Progreſſion, are compriſed in the Chord.

Each Note in the Part of the Bar *B* is to bear a Chord, by dividing the Time into four; by reaſon that, as ſoon as the Key-note appears after its Leading-note, it muſt bear its natural Chord: If that ſame Key-note appeared immediately afterwards in the following Bar, and that the Melody reſted there, the Time, or Part of the Bar *B*, ought not to be divided; but the Melody which reſts upon the Fifth or Governing-note, creates, as it were, in

In that Caſe, an irregular Cadence, from the laſt Crotchet, at the Time *D*, to the ſubſequent and next Note.

The firſt and Third Crotchets of the Time *C* are not of the ſame Chord, but paſs to the ſecond and fourth Crotchets, which are Part of the Chord; for it was abſolutely neceſſary that this laſt Crotchet ſhould be compriſed in the Chord, ſince it paſſes from one Part of the Bar to the other by a conſonant Interval: You will find the like Paſſages at *F* and *D*.

The Dot at *D* repreſents the preceding Note, and the Chord of the Tritonus, figured over it, keeps on until the Expiration of the Dot, ſo that the Tritonus is reſolved but upon the next following Part of the Bar.

Thus we have endeavoured to explain what hath hitherto appeared but under very confuſed, obſcure, and abſtracted Rules; and it is by Means of this Facility and Liberty of figurative Melody, and by inverting the Chords, that proceeds that incomprehenſible Variety in Muſic.

CHAP. XL.

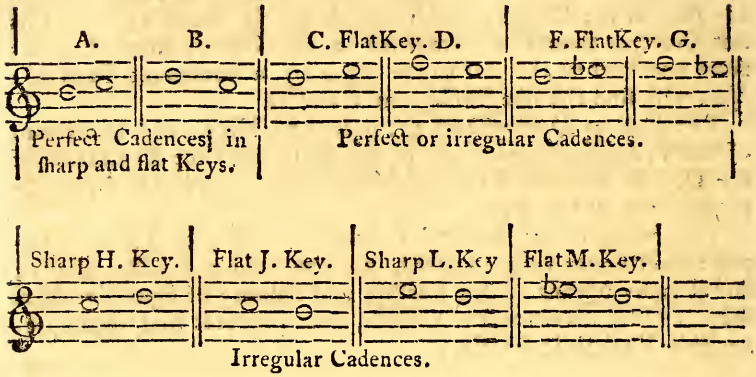
Of the Manner of compoſing a fundamental Baſs *to* a Treble.

THE fundamental Baſs is a ſure Method for finding that which is proper to a Treble already compoſed, eſpecially for thoſe Perſons who have not a natural Genius or Taſte to feel, as it were, that Baſs at the ſame Time that the Treble is compoſed; for every Melody or Air hath its natural Baſs; and, for ever ſo little that we are ſenſible of a perfect Harmony, we naturally ſing the Baſs to all Cadences, when we hear the upper Part, which is ſufficient to know the Key we ſing in; and thus from one Cadence to another, whether it be a perfect or an irregular Cadence, for there is no Difference in the Treble between the falſe or flying Cadence and the perfect; we know the Alteration of the Keys; and the fundamental Baſs (which bears only the perfect Chord and of the Seventh) will more readily ſhew it.

EXAM-

E X A M P L E.

Of the different Progreſſions of a Treble *in* Cadences.



All theſe Cadences are in the Key of *C* only, though they bear an Affinity to other Keys.

The perfect Cadence *A* aſcends from the Leading-note to the Key-note, in ſharp and flat Keys, although it might have aſcended from the ſecond Note to the third, in flat Keys, according to the Example *F*.

The perfect Cadence *B* deſcends from the ſecond Note to the Key-note, in ſharp and flat Keys, though in flat Keys it might have deſcended from the fourth Note to the third, according to the Example *G*; ſo that the ſharp Key of *C* and the flat of *A* have a great Relation one to the other in theſe two firſt Cadences; and theſe two Cadences may equally take Place as well in a ſharp as a flat Key, where the Diſtance is but of a flat Third, as from *C* to *A*, from *F* to *D*, from *G* to *E*, &c.

The Cadences *C*, *D*, *F*, *G*, which are arbitrary between the perfect and irregular, are not diſtinguiſhed but by the Progreſſion given to the Baſs, either by aſcending a Fourth upon the Key-note, in order to make a perfect Cadence, or by deſcending a Fourth upon that ſame Note, or upon the Governing-note, in order to make an irregular Cadence: When we ſay *or upon the Governing-note*, it is by ſuppoſing that theſe Cadences can repreſent another Key than that of *C*; for thoſe at *C* and at *D* may be taken for irregular Cadences in the Key of *D*, and that at *D* may be alſo taken for an irregular Cadence in the Key of *F*; thoſe at *F* and *G* may be taken for perfect in the Key of *E*♭; but the true irregular Cadences, upon the Governing-note to *C*, are thoſe in the Examples *H*, *J*, *L*, *M*, although the Example *H* may

may repreſent a perfect Cadence, or an irregular, in the Key of *B*♭; that at *J* may repreſent an irregular in the flat Key of *A*; that at *L* may repreſent a perfect Cadence in the Key of *D*, and, finally, that at *M* may repreſent an irregular in the ſharp Key of *B*♭, in the flat Key of *G*, and in one and other of *E*♭. The Uſe that may be gathered from theſe arbitrary Cadences in the Treble, is this:

1. You muſt compoſe your upper Part, or Treble, but in the ſharp Key of *C*, or in the flat Key of *D*.

Suppoſing that the other Keys are not ſo familiar to you, and in order to know whether this upper Part is truly compoſed in one of thoſe two Keys, as you cannot begin it but by the Octave, the Third, or the Fifth, you will obſerve where the firſt Cadence happens, which commonly is at the ſecond or fourth Bar; ſo that having begun by *C*, *E*, or *G*, which are the Octave, the Third, and the Fifth to *C*, if your firſt Cadence falls upon *D*, you will not therefore be in the Key of *D*; for, if it was, you ſhould have then begun by *D*, *F*, or *A*, which are the Octave, the Third, and the Fifth to *D*.

Again, if you are obliged to add ſome ♯ or ſome ♭ to the Notes for the Sake of the Melody or Air, theſe Signs will ſhew you the Key at once, according to the Explanation we have given of it in Chap. XXIV. and XXV; for, if you had begun by *C*, this *C* makes as well the flat Third to *A* and the Fifth to *F*, as it makes the Octave to *C*; and it can be but by ſome ♯ or ♭, and alſo by the Cadences, that we can diſtinguiſh the Key; though, if the Air be compoſed in a natural Manner, the laſt Note will ſhew it, for it ought naturally to be the Key-note.

2. As ſoon as you are certain of the Key you compoſe in, you muſt uſe all the Cadences that are proper to it; and, when there happen ſome that are foreign, you muſt then have Recourſe to the above Example, obſerving what follows:

1. The upper Part muſt always make the Third, the Fifth, the Octave, or the Seventh to the fundamental Baſs.

2. In the fundamental Baſs the Preference muſt be given to the Progreſſions that are the moſt perfect; ſo that the Fifth in deſcending is to be preferred to that of the Fourth, this Laſt to that of the Third, and this to that of the Seventh, obſerving that to aſcend a Second is the ſame as to deſcend a Seventh, *&c.*

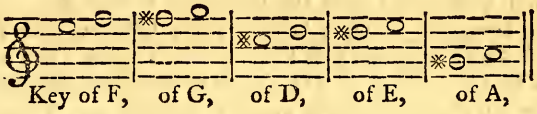
If the upper Part could not agree with the Baſs by making it deſcend a Fifth, you muſt then ſeek this Chord in a Progreſſion of a Fourth, a Third, or a Seventh, preferring the moſt perfect.

3. If you intend to follow the Stile of the fundamental Baſs, you muſt not figurate the Treble, becauſe the figurative Melody doth

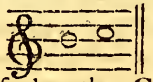
doth but puzzle Beginners; ſo that in that Caſe every Note ought to be of the Value of one part of the Bar.

4. You muſt at firſt apply only in compoſing Airs of Character, ſuch as Gavots, Courants, *&c.* becauſe the Cadences happen almoſt every two Bars.

5. If in your Airs you ſhould perceive ſame Cadences foreign to the Key, you muſt obſerve whether they end the Melody or not; if they do, then the Key changes generally to the fifth, the third, the fourth, or the ſixth Note of the Key you quit; which may be known by comparing thoſe Cadences with the preceding Example, wherein you will find that, if one of theſe Cadences ends

Thus,  it repreſents

Key of F, of G, of D, of E, of A,

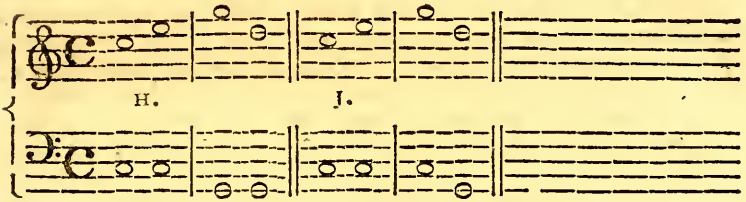
a perfect Cadence in one of thoſe Keys, in the ſame Manner as this  repreſents a perfect Cadence in the Key of *C*; ſo of the other Cadences that bear a like Relation; but, if the Melody is not abſolutely ended, you muſt let the Baſs follow its natural Road, by preferring (as we have ſaid) the more perfect Progreſſions as much as poſſible.

6. Whilſt the upper Part makes the Third, the Fifth, or Octave to a Note already placed in the Baſs, you may let this Note remain without altering it, unleſs you diſcovered that it could be done without interrupting the natural Progreſſion of the Baſs; and, in that Caſe, Variety (which is one of the principal Beauties in Harmony) requires it.

As the firſt Part of the Bar is the chief or principal, if you ſhould perceive that the Note in the Baſs, which could have been placed in another Part of the Bar, agrees with the firſt Part that precedes or follows it, it will be better either to advance or poſtpone this Note, in order that it may be heard upon the firſt Part of the Bar, obſerving two Things: Firſt, that if the Note that follows the firſt Part of the Bar can be uſed in this firſt Part, it is then that you muſt uſe, in this firſt Part, that Note which you intended to place after it: The Second is, that if the Note which you place in the unaccented Part of the Bar is the ſame as that which is heard in the next Part, without being able to place one or more Notes between them, it will be better to leave in the Baſs that Note that was heard in the firſt preceding Part, if poſſible;

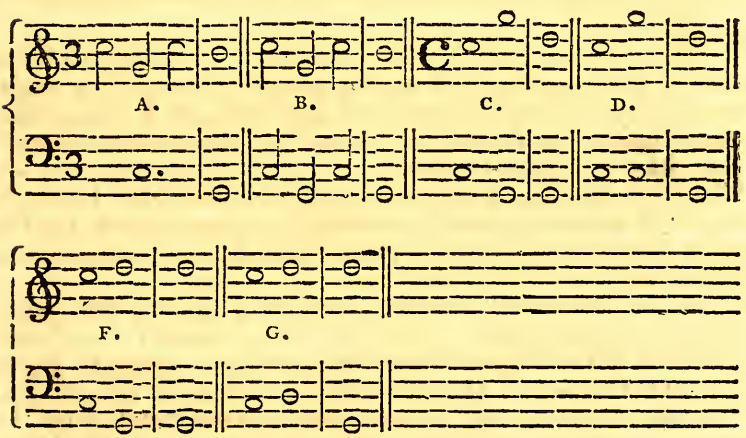
ſible ; otherwiſe you muſt ſeek for another that is not the ſame as that which is to appear in the very next ſucceeding Part.

E X A M P L E.



The Example *H* is the beſt, by reaſon that, as the Note which is heard in the ſecond Part of the ſecond Bar might ſerve in the firſt Part of the ſame Bar, it ought to be preferred.

Another E X A M P L E,

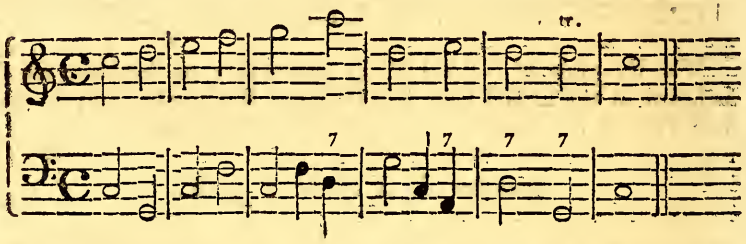


I can keep upon the ſame Note of the Baſs in the firſt Bar of the Example *A*, though I might alter it as in the Example *B*, becauſe I can place another Note between that of the ſecond Part of the firſt Bar and that of the firſt Part of the ſecond Bar; whereas in the Example *C* and *F* I am not to make Uſe of the ſecond Note of the firſt Bar in the Baſs, becauſe it ought to be heard immediately upon the firſt Part of the next Bar ; ſo that I make Uſe of the Note that hath already been heard in the firſt Part of the Bar *D*, becauſe it agrees with the ſecond Part ; and

I chuſe another at *G*, becauſe the ſame firſt Note cannot be concordant in this Place with the ſecond Part.

8. It is oftentimes neceſſary to divide a Note in the Treble into two equal Parts, in order that two different Notes in the Baſs may be heard and may agree with that ſame Note in the upper Part; and this is done for the better preſerving the conſonant Progreſſion of the Baſs, and that the moſt perfect Progreſſion may be heard between theſe two Notes of the Baſs, and the next.

E X A M P L E

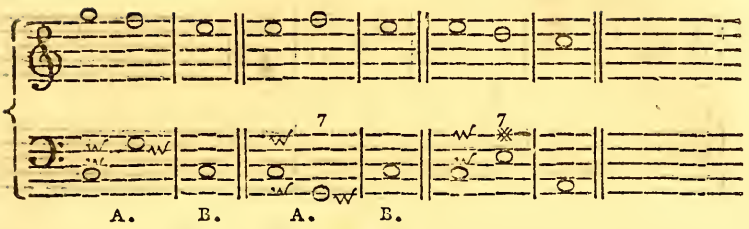


This Diviſion is alſo uſed, in order that the moſt ſuitable Notes to the Key may be heard on the principal Parts of the fundamental Baſs; which Notes are the Key-note, its Fifth, or Governing-note, its Fourth, its Sixth, and ſometimes its Second; and thus, by Order of Perfection, its Third is ſeldom uſed, and never its Seventh, in whatever Part of the Bar they happen to be; for, when it cannot be avoided, it is certain that the Key changes, as may be known by ſome ♯ or ♭, or by ſome foreign Cadences.

9. The principal Parts of the Meaſure or Bar are thoſe where the firſt Diſcord is to be heard, when it is prepared; for, if there be found ſeveral Diſcords following, you muſt only take Notice of the Firſt; and a Diſcord unprepared cannot be uſed but in a diatonic Progreſſion of the upper Part, by deſcending three Degrees, or by aſcending and deſcending immediately afterwards, whilſt the Baſs aſcends a Third, or a Fifth, in order afterwards to deſcend a Fifth; and then the Diſcord is found in the Middle of thoſe three Degrees.

E X A M-

E X A M P L E



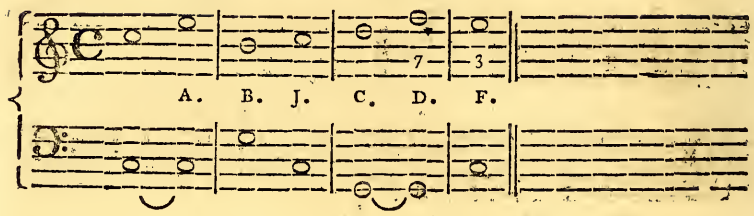
Inſtead of making the Baſs to aſcend a Fifth in the firſt Bar of the Example, you may only make it aſcend a Fourth, in which Caſe the Diſcord will not appear; and it is by this Manner that you may tranſpoſe a perfect Cadence, into an irregular, and an irregular into a perfect; ſee the Notes *A*, *B*, where another Note may be placed upon the Guide in Lieu of that marked with an *A:* The Notes *A B* making a perfect Cadence, and the Note *A*, placed in the Room of the Guide, making an irregular Cadence with the Note *B*.

The Guides, placed over the firſt Note of the Bar, ſhew the Progreſſion that the Baſs might alſo follow on the like Occaſion, by putting this firſt Note in the Place of either of the Guides.

You muſt remember that there is no other Diſcord but the Seventh in reſpect to the fundamental Baſs, and that the other Diſcords ariſe by its being inverted, that is to ſay, by chuſing for Baſs one of the Notes that make up the Chord of the Seventh, which the fundamental Baſs ought to bear; wherein muſt be obſerved all that we have ſaid concerning it in Chap. XVII, XVIII, XX, XXI, XXII, and XXVI.

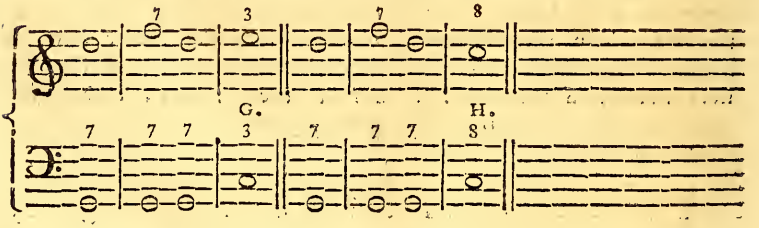
There are ſome Paſſages where the Seventh has a good Effect againſt the fundamental Baſs without being prepared, even whilſt the upper Part makes a disjointed Interval; but then the Note in that Baſs, that hath been heard before the Seventh, remains upon the ſame Degree; ſo that it will always be proper to uſe the Seventh in this Manner, provided that the upper Part deſcends diatonically immediately afterwards, and that the Baſs may aſcend, in this Caſe, a Fourth, in order to make the Third with the upper Part after the Seventh.

E X A M P L E.



The Treble proceeds by Skips or disjointed Degrees between the Notes *A* and *B*, where the Seventh might be heard upon the Note *B*, if we were willing to keep the firſt Note of the Baſs on the ſame Degree; but as the upper Part doth not deſcend after this Note *B*, and, if the firſt Note of the Baſs had remained, it could not have made the Third with the Note *J* by aſcending a Fourth; the Baſs muſt be altered, as we have done it, by preferring its moſt perfect Progreſſion; and what you do not find between theſe Notes *A*, *B*, *J*, you will find it between the Notes *C*, *D*, *F*, according to the Explanation we have juſt now given of it. This is what was alſo called Suppoſition, or a Diſcord for the Sake of the Melody or Air; but this Diſcord takes Place from the firſt Note in the Treble, whilſt that of the Baſs remains upon the ſame Degree, in order to receive this Diſcord, which appears afterwards, as may be obſerved, by making all the Sounds of the Chord of the Seventh to be heard together upon the firſt Note of the Baſs that ſtrikes with the Note at *C*; conſequently the Treble may again paſs after this Seventh upon other Notes of the ſame Chord, but it will always return to a Note that ſhall make the Third to that Note that aſcends a Fourth in the Baſs *G*, or, at leaſt, to a Note that ſhall make the Octave to it.

E X A M P L E.



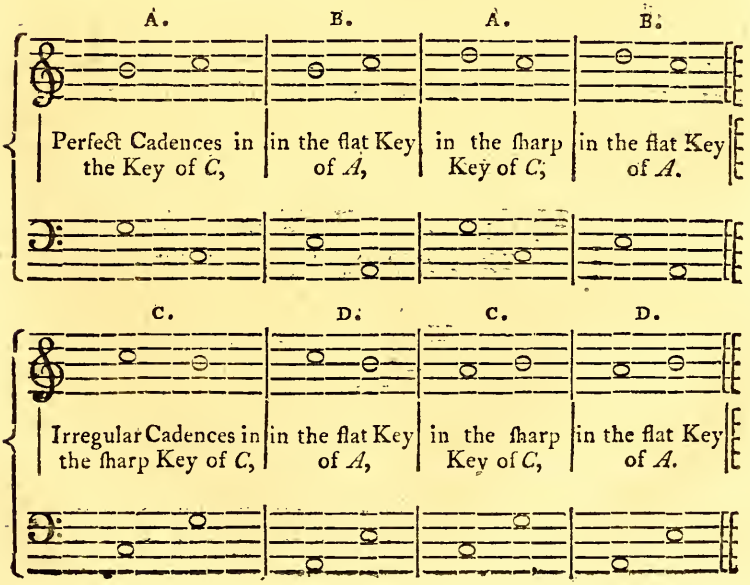
Inſtead of making the Baſs to aſcend a Fourth, we might make it to aſcend only one Degree, which would then create a falſe or flying

flying Cadence; but that can take Place but in a borrowed Baſs, or inverted from the fundamental, which depends, in that Caſe, upon the Fancy or Taſte of the Compoſer in the Middle of a Piece only, provided that the Baſs did not make two Fifths together with the Treble.

10. When you perceive divers Cadences of the ſame Species in the ſame Key, you muſt ſee if one of thoſe that are in the Middle of the Melody, and which doth not make an abſolute Concluſion, would not be ſuitable to a Cadence in another Key, in which Caſe it would then be proper to give it this foreign Cadence for a greater Variety in Harmony; for an Air becomes inſipid, when the ſame Cadences are too often heard: And, ſuppoſing that your Taſte would not ſuffer you to alter the upper Part, you muſt at leaſt endeavour to make this Variety in the Baſs in the Middle of the Air, and eſpecially in thoſe Cadences that do not declare an abſolute Concluſion.

If you are in a ſharp Key, the foreign Cadences that bear an Affinity to it, can be taken but in a flat Key, the Key-note of which being but a flat Third under that of the ſharp Key you are in; and, if you are in a flat Key, they can only be taken in a ſharp Key, the Key-note of which being but a flat Third above that of the flat Key; and obſerving that this Difference may only appear in the Baſs, ſince the Melody, or upper Part, will not be thereby altered. See the following Example.

E X A M P L E



The perfect Cadences *A B*, and the irregular Cadences *C D*, in the upper Part, may be naturally found in the ſharp Key of *C*, or in the flat Key of *A*; ſo that, if you are in one of thoſe Keys, you have the Choice of one of theſe Cadences for the other Key: If you are in the Key of *C* ſharp, the ſame Cadence may ſerve for the flat Key of *A*; and, if you are in this laſt, the ſame Cadence may ſerve for the other Keys that bear the like Relation; ſuch as the flat Key of *D* with the ſharp Key of *F*, and the ſharp Key of *G* with the flat Key of *E*.

This Manner of tranſpoſing a Cadence from one Key to another is a great Help, when you are abſolutely determined to change the Key.

You may alſo make Uſe of the falſe or flying Cadence in either of the above Caſes.

11. The irregular Cadences are excellent in the Middle of an Air; and, when the Air or Tune is divided into two Parts, they may ſerve to end the firſt Part; but you muſt not make a conſtant Practice of it, they being rather to be uſed in the ſecond, ſixth, and tenth Bars, than in the fourth, eighth, and twelfth, where the perfect Cadence is more ſuitable and proper; and, when a perfect Cadence happens in the ſixth or in the tenth Bar, you may uſe in its Stead the falſe or flying Cadence.

12. When you tranſpoſe a Cadence from one Key into another, it is ſometimes proper to prefer the leaſt perfect Progreſſions of the fundamental Baſs to the moſt perfect; but the Whole is to be done with Judgment and Diſcretion.

13. All thoſe that compoſe an Air or Melody, as their Fancy leads them, make no Attention whether it be figurate, or whether it proceeds by conjoint Degrees; ſo that, if it be figurate, they are not ſufficiently ſkilled to diſtinguiſh thoſe Notes that make Harmony with the Baſs, from thoſe that are only for Taſte; and, if they proceed by disjoint Degrees, or by Skips, they are fearful of making two Fifths or two Octaves to be heard together with the fundamental Baſs, by not knowing that, in that Caſe, the Melody or Treble follows the Road which the fundamental Baſs ought naturally to take; and it is for this Reaſon that we are obliged to compoſe a Baſs different from the fundamental that may intirely agree with this Part already compoſed: Therefore, knowing by the fundamental Baſs the Chords that are neceſſary to be uſed in the Continuance of the Air, it is not difficult to chuſe, out of thoſe Chords, a Note for that other Baſs, that ſhall agree, in Harmony and Melody, with the Part already compoſed; for it is proper to know that two Octaves or Fifths following, do not deſtroy the fundamental and real Harmony, but they are forbidden, in order to avoid falling into a dry, inſipid, and tireſome Monotony in a Succeſſion of Chords; ſo that, after having

having eſtabliſhed the Rules of Harmony upon the moſt natural Progreſſion of the Baſs, and of the upper Part or Treble, finding the Impoſſibility there is to keep that natural Progreſſion to the Baſs, as ſoon as it can be permitted to borrow that Progreſſion for the Treble, or upper Part, we are obliged to eſtabliſh other Rules for the reciprocal Progreſſion of the Parts that are to be heard together, in order that the ſame Part, which is to be compoſed, may be ſuitable and proper to that already compoſed. Yet theſe new Rules are grounded upon our firſt Rules, where, according to the natural Order and Diſpoſition of the Parts, we do not find two Octaves nor two Fifths together: And we alſo find all the Diſcords reſolved as they ought and ſhould be, and prepared, or unprepared, according to the moſt perfect Progreſſion of the Baſs.

Sometimes we may go wide from the natural Progreſſion of the Baſs, in order to avoid thoſe frequent Concluſions which we feel in its moſt perfect Progreſſion, by applying to the Baſs one of the Notes of each concluding Chord; by this Means we keep in the Melody and Harmony that Suſpenſion which the Subject requires; for an abſolute Concluſion is proper only to a final End of the Senſe: The following Chapter will more fully clear up this Article.

CHAP. XLI.

The Manner of compoſing a continued Baſs *under a* Treble.

THE true continued Baſs ought to be the fundamental; but, as Cuſtom gives another Name to that which is dictated to us by Taſte, we diſtinguiſh it therefrom by the Epithet *continued.*

We have already ſaid, at the Beginning of the preceding Chapter, that thoſe who have a Taſte naturally felt that Baſs which was the moſt ſuitable to all Sorts of Airs; but, notwithſtanding this natural Gift, it is difficult to keep up the Truth, when it is not ſupported by Knowledge; and this Knowledge is not ſufficient to attain to a Perfection, if a true taſte is wanting; for the Liberty we have of chuſing, among the Sounds of a Chord, thoſe that we think proper for a Baſs to a Treble; yet it doth not ſtrictly direct us to chuſe thoſe that are the moſt proper; and we have no other Rule for Taſte, but Variety in Compoſition; which muſt be endeavoured to be obtained by obſerving what follows:

1. We

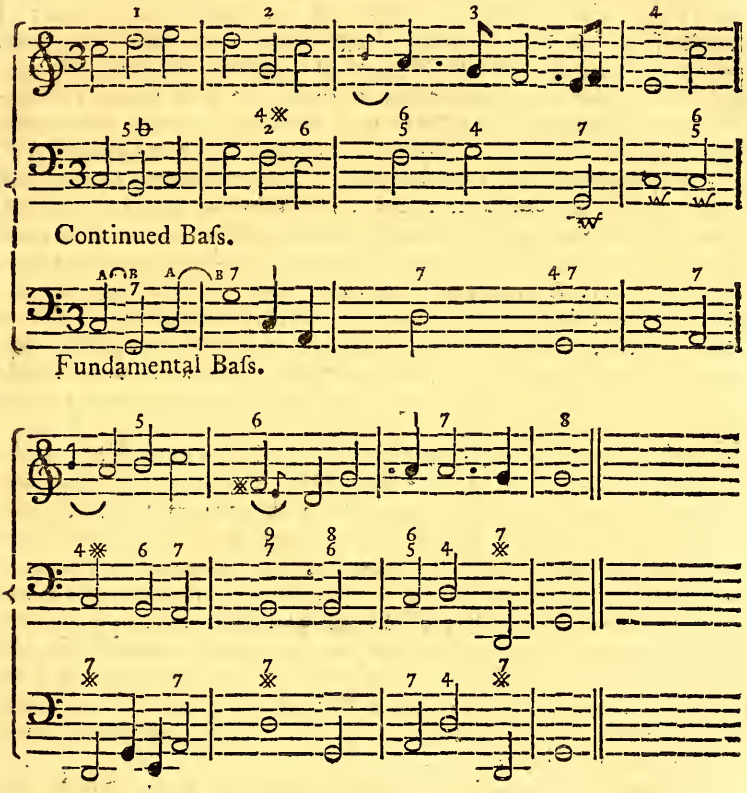
1. We muſt endeavour to avoid two Octaves and two Fifths together, by ſtrictly obſerving the Rules we have given in Chap. XIV. XVIII, XX, XXI, and XXX, for the Succeſſion of Concords and Diſcords.

2. The fundamental Baſs being compoſed, you muſt obſerve the Deſign in your Treble, the Air it expreſſes, its Movement, and every Thing in it that is ſingular and remarkable; and then you muſt endeavour to give the ſame Expreſſion in your new Baſs: You muſt avoid final Cadences where the Melody doth not require it, by chuſing out of your fundamental Chord the Sounds you think proper, ſo that they may agree with the Treble, according to the Succeſſion of Concords and Diſcords.

If you uſe ſome Diſcords, take Care that they be prepared as they ought to be, and regularly reſolved, according to the fixed Progreſſion of each Sound that the Chord of the Seventh conſiſts of; afterwards, for Variety, you muſt endeavour to uſe (between your Parts) Concords or Diſcords of different Species; for the Treble being compoſed in ſuch a Manner, and it being left to your Choice to take for Baſs what other Note of the Chord you think proper, you muſt obſerve, that in one Place you have taken the Sixth, followed by another Concord or a Diſcord; and that in another Place, though you might do the ſame Thing, yet you might give another Turn to your Baſs, ſometimes by uſing the Tritonus reſolved by the Sixth, ſometimes the falſe Fifth reſolved by the Third, ſometimes the Seventh reſolved by the Sixth, the Third, or the Fifth, according to the different Progreſſion that you may give to your Baſs; or elſe you may cauſe to be heard, between the Parts, the conſonant Notes only, of which the Chord of a Seventh is compoſed, ſuch as the Octave, the Fifth, or the Third, or, in an inverted Manner, the Sixth, or the Fourth: You may alſo make Uſe of the Chords by Suppoſition or borrowed, when you feel that the diatonic Progreſſion of your Baſs leads you to it; for this Progreſſion is always the moſt ſinging, and is to be uſed as much as may be, eſpecially where there appears no Concluſion. And you are to remember, that all minor Diſcords of a Chord, by Suppoſition, are to be prepared by the upper Part, which ſyncopes whilſt the Baſs aſcends; and, if it deſcends, it can be but by Degrees disjoint or by Skips; that the Chord, where the major Diſcord takes Place, requires the Precaution that we have given it, either in the Succeſſion of the Octave, or in what we have ſaid in Chap. XI, XXII, XXXI, XXXIV, and XXXV, of the extreme ſharp Fifth, of the extreme ſharp Seventh, of the Tritonus, and of the extreme ſharp Second; and that the Second is to be prepared by the Baſs which ſyncopes. Afterwards, when you perceive that your Melody can conclude in a certain Place, you will then follow

follow the Progreſſion of the fundamental Baſs: Thus will your Baſs be compoſed with Art and Taſte.

EXAMPLE.



Obſerve, that in the fourth Bar I might have tranſpoſed the perfect Cadence of the Key of *C* into an irregular Cadence in that of *A*, which, for Variety, would have been proper in this Caſe.

In the firſt and ſecond Bar of the fundamental Baſs, there are two equal Progreſſions *A B*; therefore, I keep that which hath the neareſt Relation to the Cadence for the ſecond Bar; becauſe that is the Place where the Cadence is moſt commonly felt, obſerving that it is an irregular Cadence in this Place, and that in the fourth Bar it is a perfect.

Again, to return to the firſt Bar, I give a diatonic Progreſſion to the continued Baſs which agrees in every reſpect with the Treble,

ble; and, in order to continue that Progreſſion in the ſecond Bar, upon the ſecond Part of the Bar, I take a Note that makes a Seventh with a fundamental Baſs, and which is reſolved by the Third to that ſame Baſs, and which agrees with the Treble; and I continue it until the Place where the perfect Cadence is felt, and then I follow the Progreſſion of the fundamental Baſs: I again ſeek for this diatonic Progreſſion in the following Bars, where I find that the laſt Note of the fourth Bar may continue upon the ſame Degree, in order to make the Third with the fundamental Baſs, and the Octave with the Treble; and, afterwards, the Sixth in the fifth Bar with the Treble, and the Seventh with the fundamental Baſs; and again, I find the Ninth in the ſixth Bar, and I do not follow the Progreſſion of my fundamental Baſs, but at the final Cloſe only. Beſides, what leads me to know the Chords which the Notes in the continued Baſs are to carry, are the Intervals they make with the fundamental Baſs; for as I know that this laſt Baſs can bear but perfect Chords, or that of the Seventh, when it is truly compoſed, conſequently, thoſe Notes that make the Third, the Fifth, or the Seventh to thoſe in the fundamental Baſs, cannot carry but thoſe Chords that derive from the perfect Chord, or that of the Seventh. So that I could equally place Figures over the Treble, if I was willing, that it ſhould be uſed, or ſerve for a Baſs: It is alſo for that Reaſon that I have figured the Ninth upon the firſt Note of the ſixth Bar, becauſe that Note is found to be a Third under or a Sixth above the Note in the fundamental Baſs, which, conſequently, cannot be admitted in Harmony but by Suppoſition; ſo that by the Chord of the Seventh, which the fundamental Baſs carries, I find that Note can bear but that of the Ninth, though the Ninth doth not appear in the Treble; but you will obſerve, that the Fifth which is found therein, makes a Part of the Chord of the Ninth, and that this ſuppoſed Ninth is prepared and reſolved according to the ſtricteſt Rules.

It would be endleſs, if we were obliged to reaſon in this Manner upon all the different Ways that a continued Baſs can be diverſified; but if you will make the proper and neceſſary Remarks upon the ſeveral Examples that are contained in this Book, by applying to each of thoſe Examples thoſe Things you would be inſtructed in; and if, for the like Purpoſe, you conſult the Works of the beſt Maſters; you will ſoon overcome all Difficulties.

CHAP.

CHAP. XLII.

Uſeful Remarks upon the foregoing Chapter.

1. YOU may compoſe a Baſs, under another Part, without the Help of the fundamental Baſs, by the Knowledge of the Succeſſion or Progreſſion of the Concords or conſonant Notes, (which Succeſſion we have fixed in ſuch a clear Manner, that it cannot admit of any Doubt) provided that you remember to paſs from a perfect Concord to an imperfect, and from this to the other, to avoid two perfect Concords together, when it can be done; whereas the imperfect Concords may follow each other (though you muſt not make too frequent uſe of this Liberty, by reaſon that it would be a Fault againſt that Variety which ought to be uſed) and to give to that Baſs a diatonic Progreſſion as often as may be, though a conſonant Progreſſion is to be ſometimes uſed, eſpecially in the chief or principal Cadences, where it is abſolutely neceſſary.

2. You may compoſe a Baſs upon the Succeſſion of the Chords $\frac{6}{5}$ fixed in the Rule of the Octave of 7 and 2, —, of 9, and others.

See Chap. XI, XXI, XXII, XXVII, XXVIII, and XXIX.

3. For Variety, you may make Uſe of the Examples where the ſeveral different Ways of making the Baſs to proceed under the ſame Treble are fixed, ſee Chap. XVII. obſerving that, of the four Parts that are contained in thoſe Examples, it may happen that one of thoſe Parts will always be like that which you ſhall have compoſed; but, leſt you ſhould be miſtaken, you muſt obſerve whether theſe Progreſſions are in the ſame Mode or Key; and, for that Purpoſe, you muſt not conſult the Notes by their Names, but by the Rank and Order they ſtand in the Key you are in, and in that of the Examples. And, as theſe Examples are compoſed in the Key of *C*, you will find that a Progreſſion from the Third to the Fifth, or from the Sixth to the Fourth, *&c.* will always bear the ſame Chords in any Key whatever.

See Chap. XIV. and XVII, of the Manner of preparing and reſolving Diſcords.

See alſo Chap. XXIV. and XXVI, Art. I, II, and III, of the Manner of removing from one Key to another; how they may be diſtinguiſhed, and how you may know what Chords are to be given to the Notes of a Baſs in any Progreſſion whatever; becauſe the Knowledge of all theſe Things connected, will free you from an infinite Number of Doubts that will ſtart at every Inſtant.

When once you are tolerably well grounded, and Maſter of all theſe Articles, you will eaſily diſcover afterwards, the Manner of practiſing Licences: You may figurate the Melody or Treble, and that of the Baſs, if you think proper, by obſerving the principal Parts of the Bar, and the Note that is to bear a Chord in each Part, in order that you may rightly and truly figure your Baſs; and, when you doubt of the Chord, you muſt place a fundamental Baſs under thoſe two Parts compoſed, by which you will ſee whether you have committed any Faults, and what Chords the Notes in the continued Baſs are to carry; obſerving that the Note which makes the Third, the Fifth, or the Seventh to that in the fundamental Baſs, can carry, but a Chord derived from it; or, if that Note in the continued Baſs is a Third or a Fifth below that of the fundamental, the Chord will then be by Suppoſition, and in that Caſe you muſt examine whether it be uſed properly, and according to the Rules.

As ſoon as your Baſs is well and rightly figured, nothing is more eaſy than to add to it two or three Parts, unleſs the upper Part, being too far ſought, ſhould hinder you from ranging thoſe other Parts in all their Regularity; which is the Reaſon, that, the more there are Parts, the more we are obliged to follow in the Baſs a fundamental Progreſſion; though we have given divers Examples of making a Baſs to proceed diatonically, or by conjoint Degrees, in the Progreſſion of an Octave, as well aſcending as deſcending, whether it be by the common Chords, by the ſeveral Chords of Sixths, or by thoſe of 7 and $\frac{6}{5}$, of 2 and $\frac{6}{4}$, of 9, &c.

We now ſhall ſhew you what is to obſerved in a Compoſition of ſeveral Parts.

CHAP. XLIII.

Rules to be obſerved in a Compoſition *of two, three, or four Parts.*

IT is difficult to ſucceed perfectly in Pieces of two and three Parts, if all the Parts are not compoſed together, by reaſon that each Part is to have an eaſy Singing and gracious Melody; and a ſkilful Man ſeldom compoſes one Part, without feeling, at the ſame Time, the Effect of the other Parts that are to accompany it.

1. Although one Part is generally choſen for containing the fineſt Melody which is called the Subject, yet, if the other Parts are

are left naked, that diminiſheth greatly the Beauty of the Subject; and it can be tolerated only in what is called a Recitative, where the Baſs and the other Parts ſerve only to fill up the Harmony; but, otherwiſe, the Melody in two or three Parts are to be pretty near alike.

The leſs there are Parts, the more Variety is required in the Chords; it is, therefore, for Pieces in two Parts that this Rule requires a greater Strictneſs.

2. When you compoſe in three Parts, the Chords muſt be filled up and completed as much as may be; and the beſt Rule for that Purpoſe is, always to uſe Thirds and Sixes, at leaſt in two Parts; the Octave ought to be uſed therein but ſeldom, unleſs the Deſign, the *Fugue, or the Melody, leads us to it, eſpecially in perfect Cadences, where each Part generally ends upon the Key-note.

* We ſhall ſpeak of *Deſign*, and of a *Fugue*, in the laſt Chapter.

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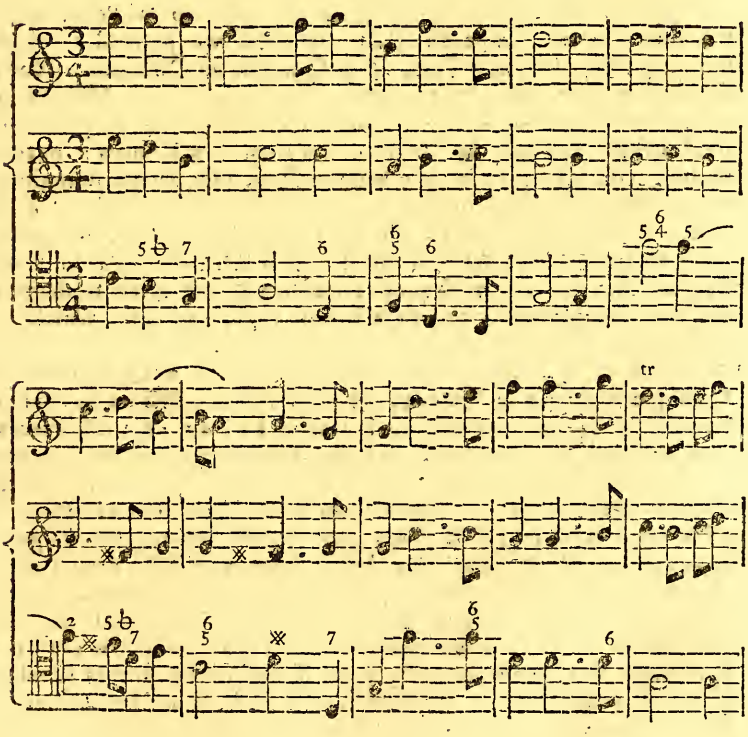

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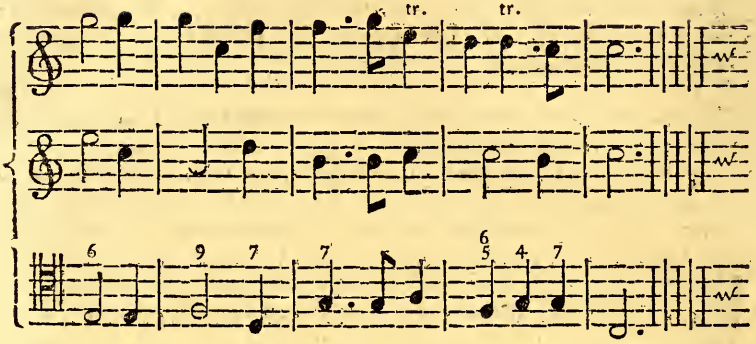


As to pieces of four or more Parts, they are made either for a Chorus of Muſic, or for Quatuors or Quinques, *&c.* (you will find a Quinque or Canon in the laſt Chapter.)

The Voices in a Chorus may be increaſed to what Number we think proper in each Part, whereas we generally chuſe but one voice for each Part, in a Quatuor or Quinque. Now, as there is ſome difficulty to give a fine, natural, eaſy Melody to every Part heard together, you muſt, at leaſt, make it predominant in the Baſs and the Treble, eſpecially in a Chorus; nevertheleſs, you may give it to whatever Part you pleaſe, ſometimes to one Part, and ſometimes to another, by preferring that which is in the higheſt Degree of the Voice, or Inſtrument, ſuppoſing there be no Voices; for our Attention is naturally led to thoſe Sounds that are the moſt acute; but we do not mean to deprive the Baſs, which ought to prime in this Caſe, and upon which we are always to be ruled in theſe Sort of Pieces.

Whatever Difficulty there be in filling up a Quatuor or a Quinque with a fine Melody, we muſt nevertheleſs endeavour to ſucceed in it; and, probably, it was in Favour of theſe Pieces, that a Fugue was invented; which, renewing ſometimes in one Part, and ſometimes in another, ſurprizes the Auditor, and obliges him to withdraw his Attention from thoſe Parts that are ſtripped of Melody, and to fix it upon that which retakes the Fugue: It is alſo by this Means, that the Auditor is artfully drawn in to give his Attention to thoſe Sounds that touch him moſt. As to the Melody of the Fugue, and the ſeveral Reſts that may be therein introduced, when you feel that the Melody is not very agreeable, it depends entirely upon Taſte, and a proper Choice, to meet with Succeſs (which is the Subject of the following Chapter) and it can be only in Chorus's that can pleaſe without Fugues; the ſame Thing is in reſpect to Duo's and Trio's.

One

One may exceed five Parts in Compoſition; but that belongs only to great Maſters of the Art, who know how to double properly the conſonant-notes or Concords, by giving them, in that Caſe, oppoſite Progreſſions, and diverſifying the Whole by Melodies more or leſs figurative.

CHAP. XLIV.

Of Deſign, Imitation, Fugues, *and* Canons.

DESIGN, in Muſic, is, in general, the Subject of all that the Compoſer propoſes; for a ſkilful Compoſer is to propoſe to himſelf a Movement, a Key or Mode, a Melody, and an Harmony agreeable to the Subject he would treat. But this Term is to be more particularly adapted to a certain Melody which he would have predominant in the Continuance of a Piece, either for making it ſuitable and agreeable to the Senſe of the Words, or for Fancy or Taſte; and in that Caſe it is diſtinguiſhed in Deſign, in Imitation, and in Fugue.

Imitation hath no particular Merit that deſerves our Attention; it conſiſting only by repeating at Pleaſure, and in any of the Parts, a certain Continuance of Melody, without any other Regularity.

Fugue, as well as Imitation, conſiſts in a certain Continuance of Melody, which may be repeated at Pleaſure, and in any of the Parts, but with more Circumſpection, according to the following Rules.

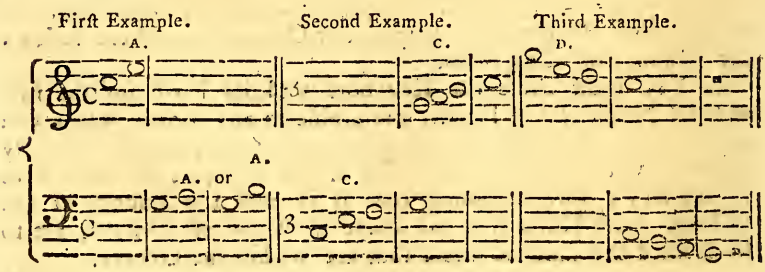
If, in Imitation, we may repeat the Melody of one or more Bars, and even the Air entirely in one or in all the Parts, and upon whatever Chords we think proper; on the contrary, in Fugues, the Melody muſt alternatively be heard in the two principal parts, which are the Treble and the Baſs, unleſs, inſtead of the Treble, we chuſe another Part; and, if the Piece contains many Parts, it will be more perfect, when the Fugue is heard alternatively in each Part. Again, the Chords that muſt be therein uſed, do not depend upon our Choice; and here follows the Manner of uſing them.

1. You muſt chuſe the Key-note and its Fifth for the firſt and laſt Notes of the Fugue, preferable to any other, when you are not yet thoroughly aſſured of what you do; and the Melody of this Fugue is to be compriſed in the Compaſs of the Octave to the Key; for, ſuppoſing that it exceeds the Bounds of the Octave, thoſe Notes that are above or below the Octave, are to be deemed the ſame as thoſe that are within the Octave.

2. If

2. If one Part begins or ends by the Key-note, the other Part is to begin and end by the Fifth; and thus, in reſpect to every Note that anſwers within the Compaſs of the Octave to the Key; and ſo contriving it, that the Notes that are found between the Key-note and its Fifth, may anſwer equally in each Part; that is to ſay, that the ſecond Note which is immediately above the Key-note, may anſwer to the Sixth, which is immediately above the Fifth; and thus, reciprocally, of that Note which is a Third, a Fourth, or a Fifth, either above or below the Key-note to that which is in the ſame Degree above or under the Fifth, according to the Progreſſion of the Melody, which may either aſcend or deſcend; for the Regularity and Conformity, required in the Notes that begin and end the Fugue, are to be equally obſerved in the whole Continuance of the Melody which the Fugue is compoſed of.

3. As in a diatonic Progreſſion, either aſcending or deſcending from the Key-note to its Fifth, and from this laſt to the other, there is one Note Difference either more or leſs, you may make one of thoſe two Notes, in conjoint Degree of that Progreſſion that contains the greateſt Number, to agree with that Progreſſion which muſt unavoidably be uſed, wherein there is one Note leſs, and this in the Middle of the Melody; for Inſtance, if the Melody of the Fugue proceeds by deſcending from the Key-note to its Fifth, we can therein make Uſe but of the ſixth and the ſeventh Notes; whereas, in order to make the ſame Melody equal in deſcending from the Fifth to the Key-note, we can paſs upon the fourth, the third, and the ſecond Notes; ſo that we muſt chuſe one of theſe three laſt Notes that is the neareſt to the Key-note upon which the air of the Fugue ends, in order to give it a Melody pretty near like that which was firſt heard. Likewiſe, if we proceed by that Progreſſion that contains the greateſt Number of Notes, we muſt make that which hath the leaſt Number to agree with it, and this rather towards the End of the Melody than at the Beginning; but an Example will better explain it.



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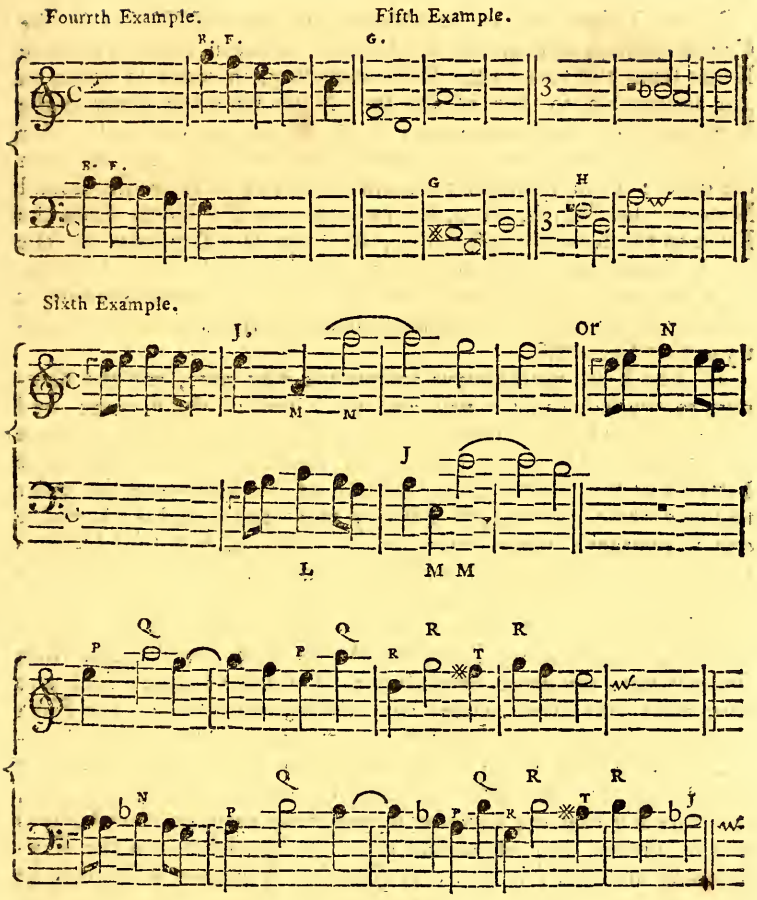


In the firſt Example, the ſixth or the ſeventh Note anſwers to the Third *A.*

In the Second, the Sixth anſwers to the Third *C.*

In the Third, the Seventh anſwers to the Third *D.*

In the Fourth, the Fifth *B*, or the Fourth *F*, anſwers to the Key-note *B. F.*

In the Fifth, the Third anſwers to the Seventh *G*, or to the Sixth *H.*

In the Sixth, the Third anſwers to the Seventh *L*, or to the Sixth *N*; the Second anſwers to the Sixth *J*, or to the Fifth *P*; the Fifth anſwers to the Second *M*, or to Key *Q*; and the Key-note anſwers to the Fourth *R.*

Many

Many Things are to be obſerved to avoid Miſtakes in the Choice (which appears to be arbitrary) between each of the five Notes from the Key to the Fifth aſcending, in order to make an Air anſwerable to that of the four Notes from the Fifth to the Key-note aſcending, whether the Air aſcends or deſcends; for there will always be found five Notes one Way, and four on the other; even ſometimes we are obliged to borrow the ſecond Note or the Fourth, in order to make up five Notes from the Fifth to the Key-note aſcending, or from the Key-note to the Fifth deſcending, which is the ſame Thing; and thoſe Authors, who have wrote of Fugues, have neglected theſe Obſervations, it will not be improper to diſcloſe what Experience hath taught us upon this Subject.

1. The Fifth muſt always anſwer the Key-note, and the Key-note to the Fifth in the firſt and laſt Notes of the Fugue; and we cannot go from this Rule but in the Middle of the Air, where it is permitted to uſe or borrow the fourth Note in Lieu of the Fifth, and the ſecond Note in Lieu of the Key-note, in order to make the Succeſſion of Melody more equal and conformable one to another; there being, by this Means, but four Degrees from the ſecond Note to the Fifth aſcending, or from the Fourth to the Key-note deſcending, from which you may compoſe an Air pretty near like that which is within the Compaſs of the four Degrees, from the Fifth to the Key-note aſcending, or from this laſt unto the other deſcending: The ſame Liberty will alſo furniſh us with five Degrees from the ſecond Note to the Fifth deſcending, and from the fourth Note to the Key-note aſcending, according to the five Degrees from the Fifth to the Key deſcending, or from this laſt unto the other aſcending; and, when we ſay that the Melody formed from theſe borrowed Notes will be pretty near alike that which is heard between the Key-note and its Fifth, it is by reaſon that it cannot abſolutely be the ſame, on Account of the diatonic Degree of each Mode, the Notes of which cannot be altered by any new Sharp or Flat, ſaving in flat Keys, where a Flat muſt be added to the ſixth Note, when it deſcends; and a Sharp to the Leading-note, when it aſcends; being at Liberty, alſo, to add ſometimes a Sharp to the Third of flat Keys, and to the Fourth of all Keys, when they anſwer the Leading-note; as we have done it in the ſixth Example, to the Notes marked with a *T*, provided that thoſe Notes make the ſharp Third, or Sharp Sixth, with the Baſs.

2. The Baſs of the Fugue being found, you may ſeek, alſo, for the other Parts that might accompany the Melody and the Baſs; wherein may be obſerved, that that Baſs and the other Parts will follow pretty near the ſame Progreſſion with the firſt Melody and the Anſwer; and alſo, that the Baſs will bear the ſame Chords in

in one as in the other, if it be truly imitated; ſo that by the Means of this Baſs, and of the other Parts, we may find that of making ſeveral Fugues to be heard together, or to compoſe another Species of Fugue, called a Canon, of which we ſhall ſpeak hereafter.

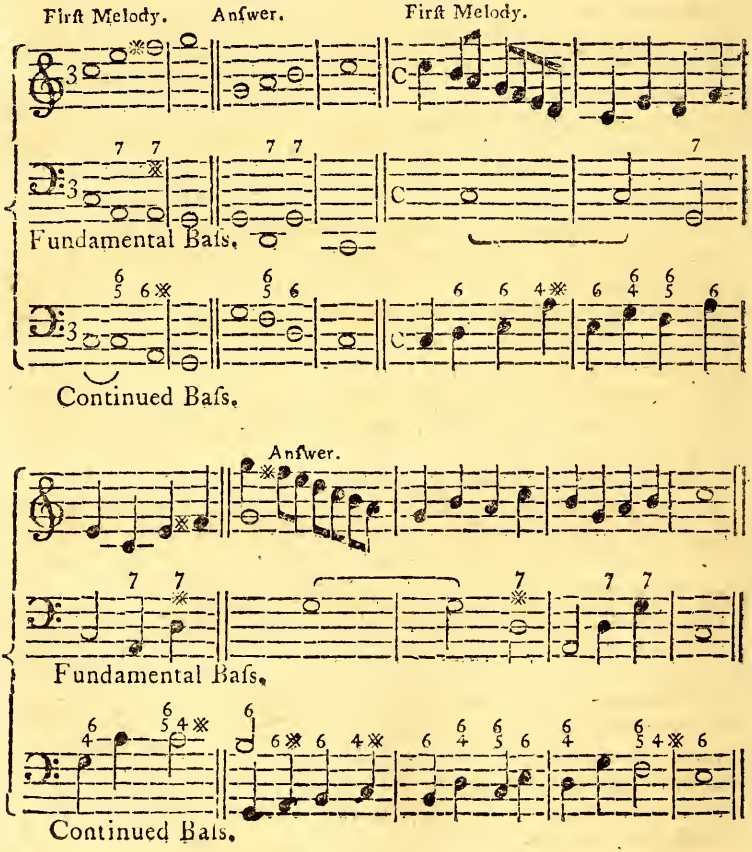
3. The Melody of one Fugue may admit of ſeveral different Baſſes; it may be ſo compoſed, that it may be more ſuitable to the Baſs, than to any other Part; which is indifferent, for, by inverting the Chords, we can compoſe various Baſſes, or cauſe one Part to ſerve as a Baſs, though the Melody might be more proper for a Treble; but nothing is more pleaſing than to uſe alternately theſe different Ways of accompanying a Treble or a Baſs, eſpecially in a Fugue, where a Variety can only be diſcerned in the Parts that accompany it: And, if we have ſaid that the Baſs of a Fugue might always be pretty near the ſame, it was only, in order to give the moſt juſt and true Idea of the Manner how the Melody of a Fugue ought to be imitated; for this Likeneſs in the Chords is, of itſelf, a ſufficient Proof thereof.

4. In order to know the Choice that ought to be made of the Notes contained within the Compaſs of the Key-note to its Fifth aſcending, and from this to the other deſcending, you muſt always keep in View the Key-note and its Fifth, at which Notes the Melody of each Fugue generally ends; but they are not to hinder us from making the Intervals of the Anſwer to be conformable to thoſe of the Fugue inverted, eſpecially in the Middle of the Air: So that, having made an Interval of a Third, Fourth, Fifth, Sixth, or Seventh, in the Midſt of the firſt Melody, we are to make the like in the ſame Part of the Melody that anſwers the Firſt, and ſo of the others. Yet this laſt Rule is not ſo general, but that one may deviate from it, in Favour of a diatonic Progreſſion, or in Favour of the principal Notes of a Mode, having Regard rather to what follows than to what precedes; and to the Key-note and its Fifth (which generally begins and ends the Fugue) than to this Uniformity of Intervals which we have propoſed. So that the Interval of a Fourth is oftentimes to anſwer that of a Fifth, and this laſt to anſwer the other; but, moreover, if, after a conſonant Interval, there appear one or more diatonic Intervals, we muſt then have Recourſe to thoſe Places where the Key-note appears, in order that the diatonic Progreſſion, which is found from the laſt conſonant Interval until the Key-note, be regularly imitated in the anſwering Part until the Fifth; or, if the Progreſſion leads to the Fifth, it muſt be imitated in the anſwering Part towards the Key-note, eſpecially when a Progreſſion (be it which it will) ends by a Cadence; for the final Cadence of a Fugue muſt always be made

upon the Key-note and upon its Fifth: Though, if that Cadence doth not abſolutely end the Fugue, then we may uſe the Fourth inſtead of the Fifth, and, ſometimes, the Second inſtead of the Key-note.

A Fugue ought ſeldom to begin or end but by the Key-note, its Fifth, or Third; the Sixth or the Seventh anſwering then to that Third, as it appears in the fifth preceding Example: So that, by ſticking to what follows, rather than to what precedes, and by the Conformity of the Chords that are to meet over the Baſs uſed to Melodies anſwering one another in Fugue, you will ſeldom be miſtaken.

E X A M P L E



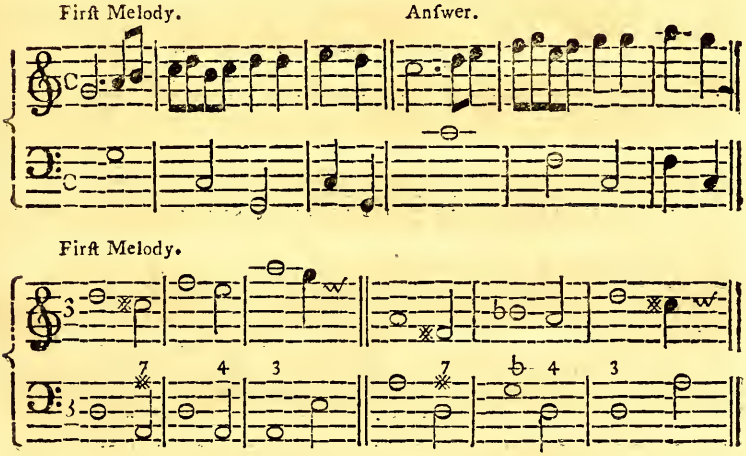
The

The continued Baſs is placed only to ſhew, that, whatever Baſs you may imagine under a Melody propoſed, it may always have the ſame Uniformity, by bearing the ſame Chords, but the Fundamental is ſtill better in this Caſe.

5. The Melody or Subject of a Fugue ought to contain, at leaſt, half a Bar; and, if it contains more than four, the Anſwer muſt begin in the Fourth; and yet the Movement ought to be ſomewhat quick, that ſo long a Succeſſion of Melody, ſtripped of Harmony, may pleaſe.

6. A Fugue may begin by any one of the Parts, but it ought naturally to end upon the firſt Part of the Meaſure or Bar, when it is divided into two Parts; and upon the third Part of the Bar, when it is divided into four; and, when it ends in any other Part, it is either for the Sake of the Words, or for Fancy only. Sometimes, for Novelty, we may treſpaſs upon theſe Rules, which depend only upon a good Taſte; and the Surpriſe which theſe Sort of Fugues that end contrary to the Rule create, can be but pleaſing, when they are done with Judgment and Diſcretion; they may alſo end upon other Notes than the Key-note and its Fifth.

E X A M P L E.



7. The Melody of the Fugue is to be imitated, in every Reſpect, as much as can be; for the ſame Quantity of Semibreves, Minums, *&c.* contained in any Part of the Meaſure, muſt be uſed wherever the Fugue is heard.

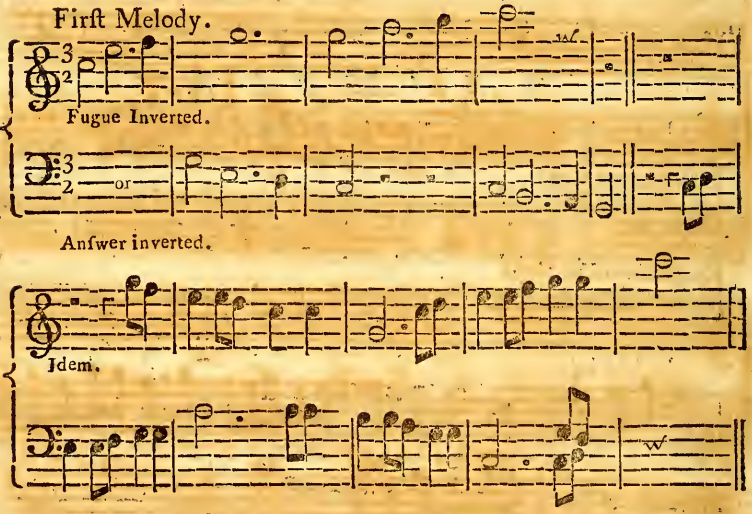
8. You may begin each Part in the Uniſon, or at the Octave of the firſt Part; but, when theſe Parts follow each other at the Fifth or Fourth, it is more agreeable, and produces a better Effect.

A Fugue may begin, and be anſwered, by any of the Parts in the whole Courſe of the Piece; and, when you change Keys, every Note of the Fugue muſt be the ſame in this new Key, as well in Reſpect to the Degree they occupy in the firſt Key, as in their Quality, Quantity, and Meaſure.

9. You may wait until the Melody or Subject of the Fugue be entirely finiſhed, ſo that each Part may anſwer it one after another; but, as it ſometimes happens, that, in the Midſt of the Deſign, each Part may be made to anſwer, it has no bad Effect, provided that nothing be thereby altered. See the ſixth Example.

10. By Inverting, all that Variety that may be introduced in Harmony, gives a new Grace to a Fugue; ſo that, having framed a Deſign or Subject, you may invert it in ſuch a Manner, that the ſame Inverſion which has been heard aſcending, may be heard deſcending; and, *vice verſa*, without any other Alteration.

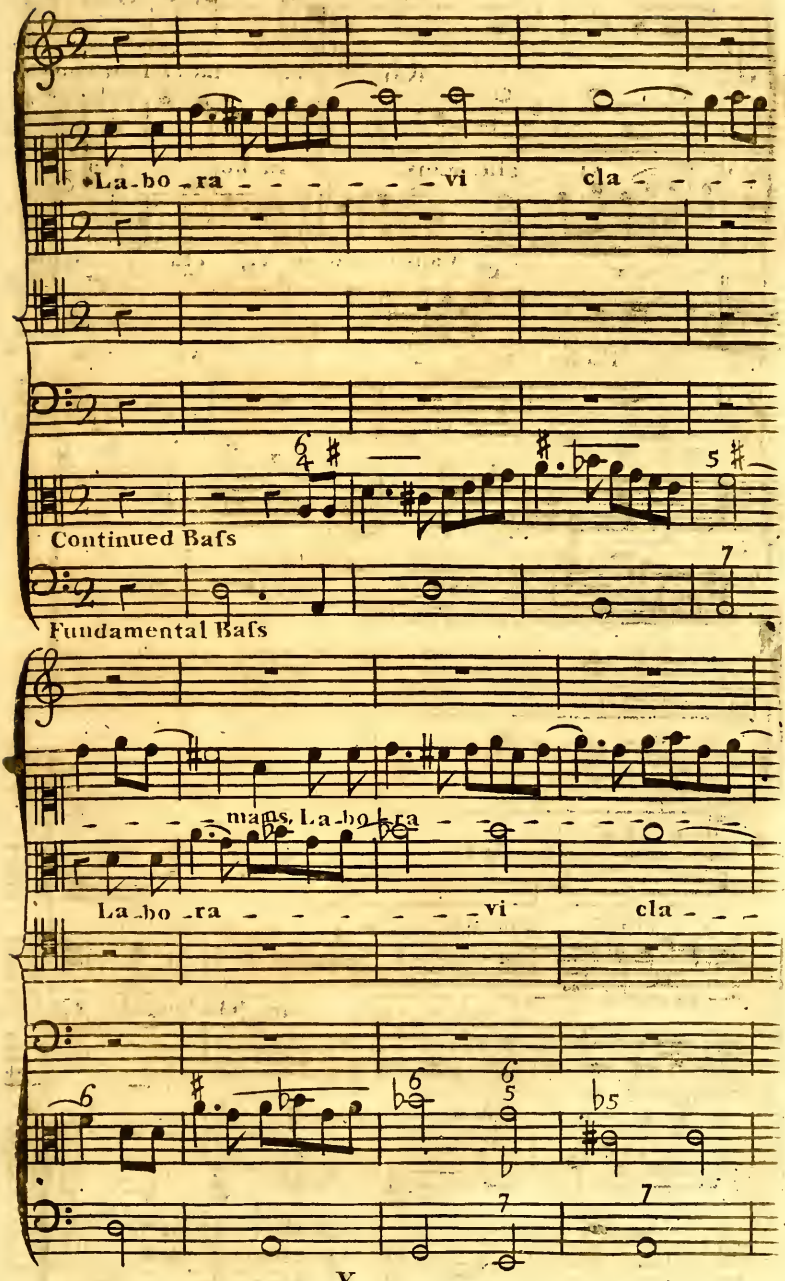
E X A M P L E.

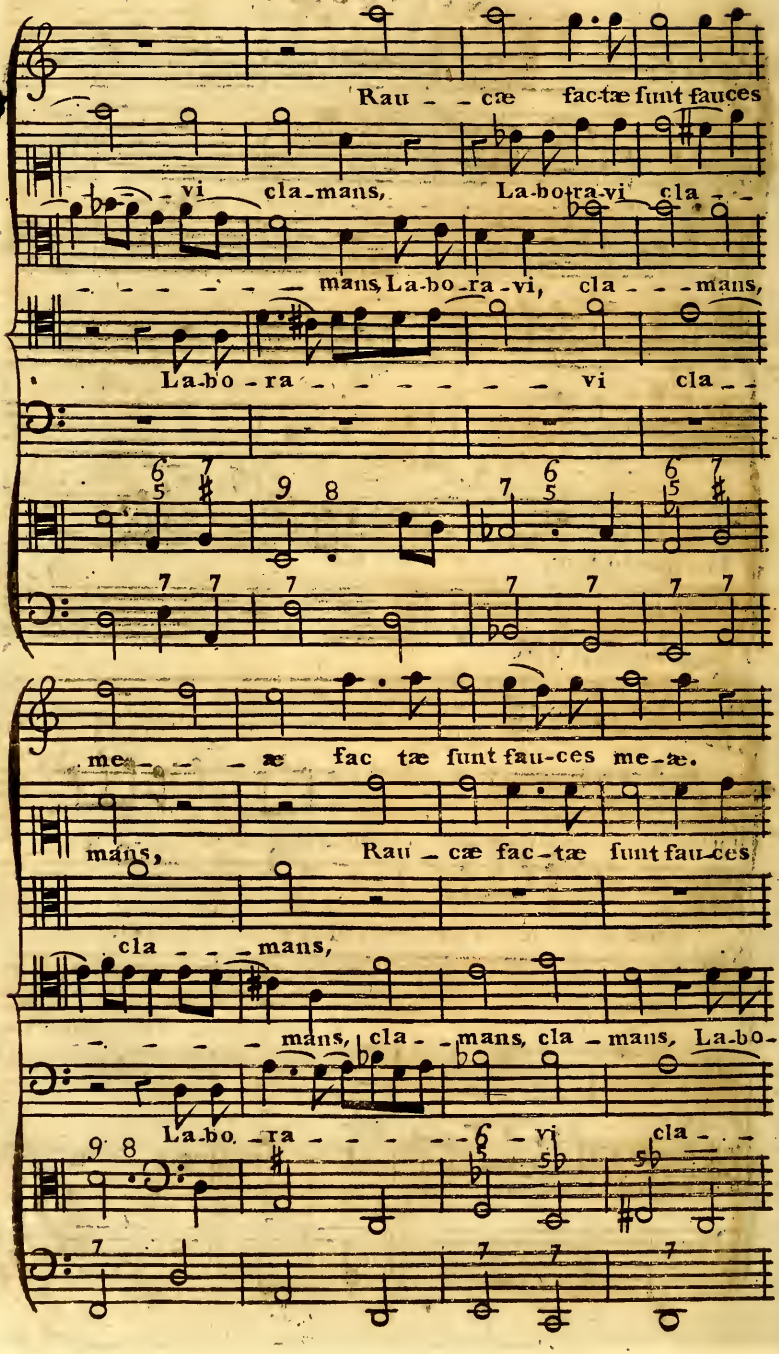


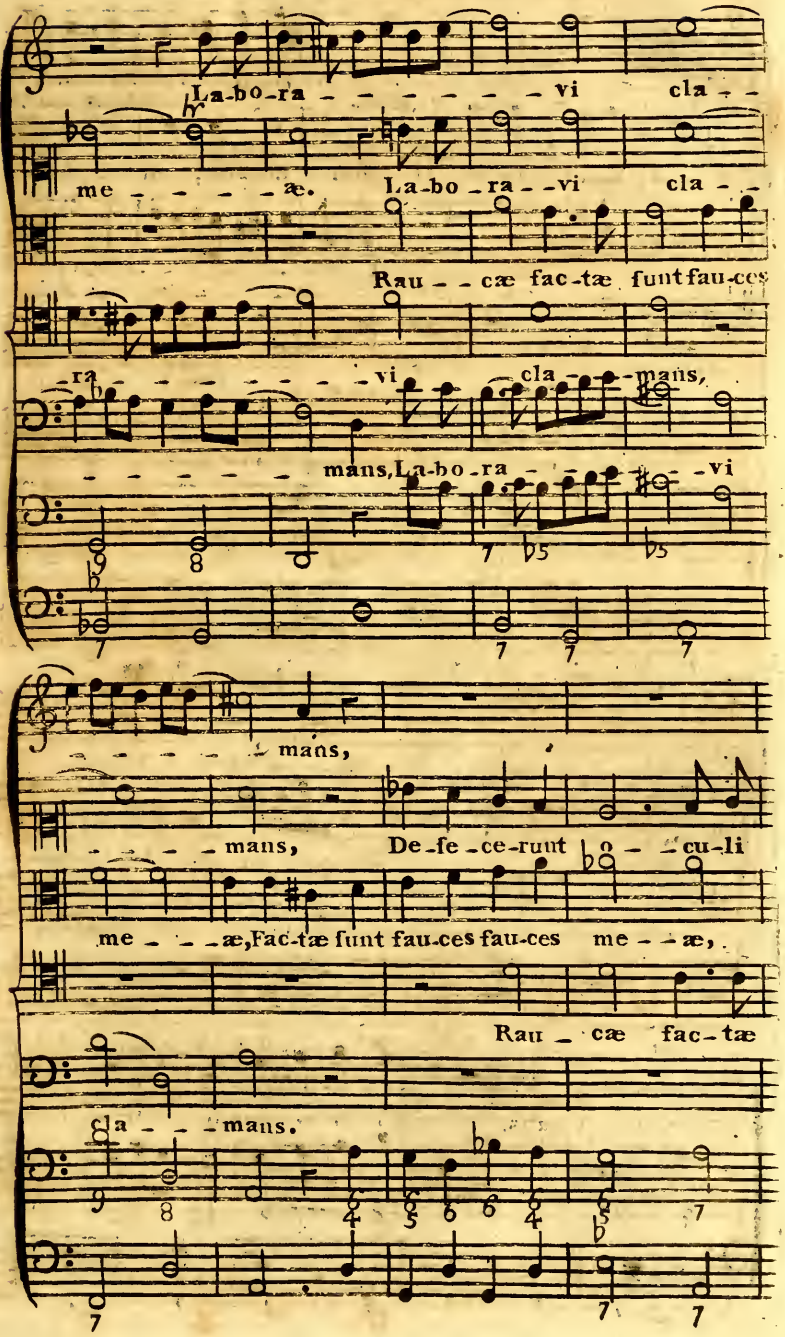
11. Several Fugues may be heard together, or one after the other; and it ought to be contrived, as much as poſſible, that they ſhould not always begin at the ſame Part of the Bar, or in the ſame Bar, eſpecially for the firſt Time; and that their Progreſſions be inverted, and differently characteriſed; that is to ſay, that, if the one contains ſome Semibreves, the other ought to contain Minims, Crotchets, *&c.* at the Will of the Compoſer; and, if they cannot be heard together, that a Part of the one may, at leaſt, be heard with a Part of the other, which will be better explained by the following Example.

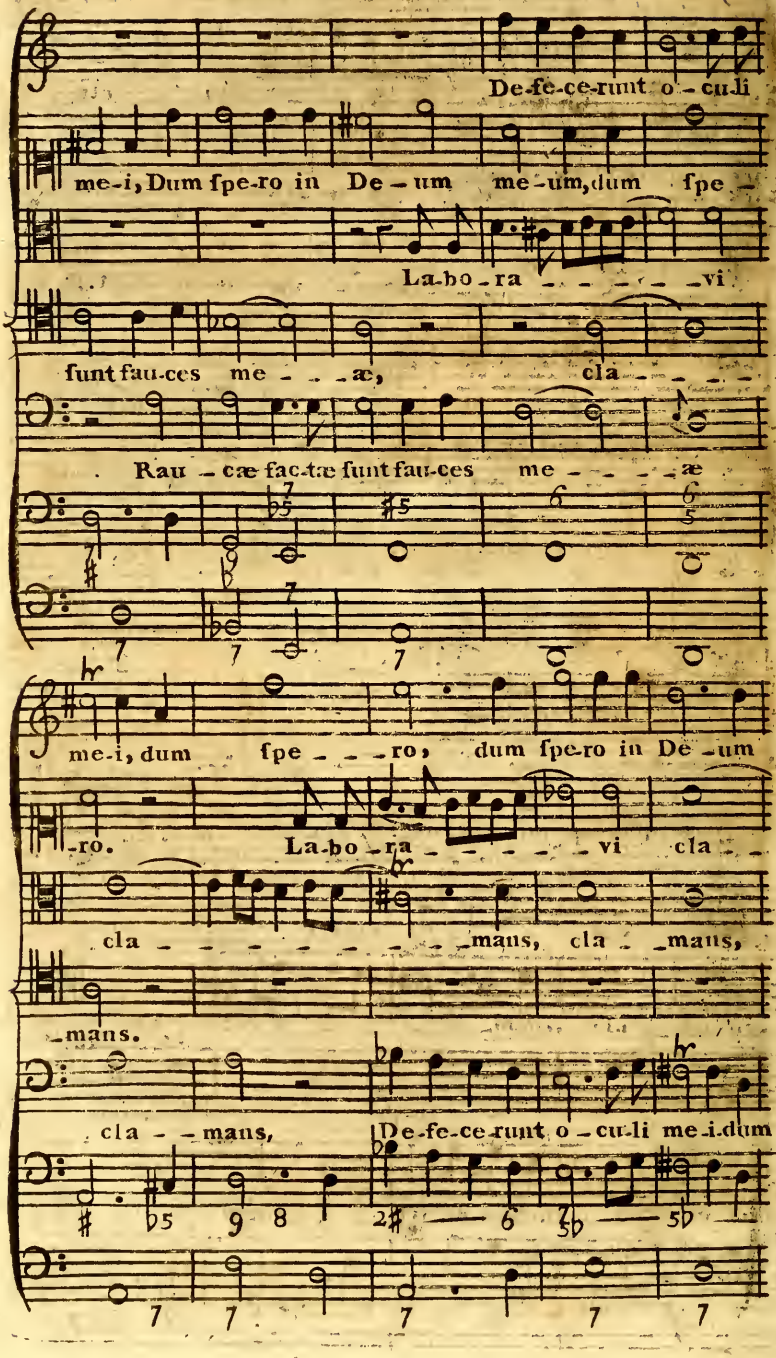
QUIN-

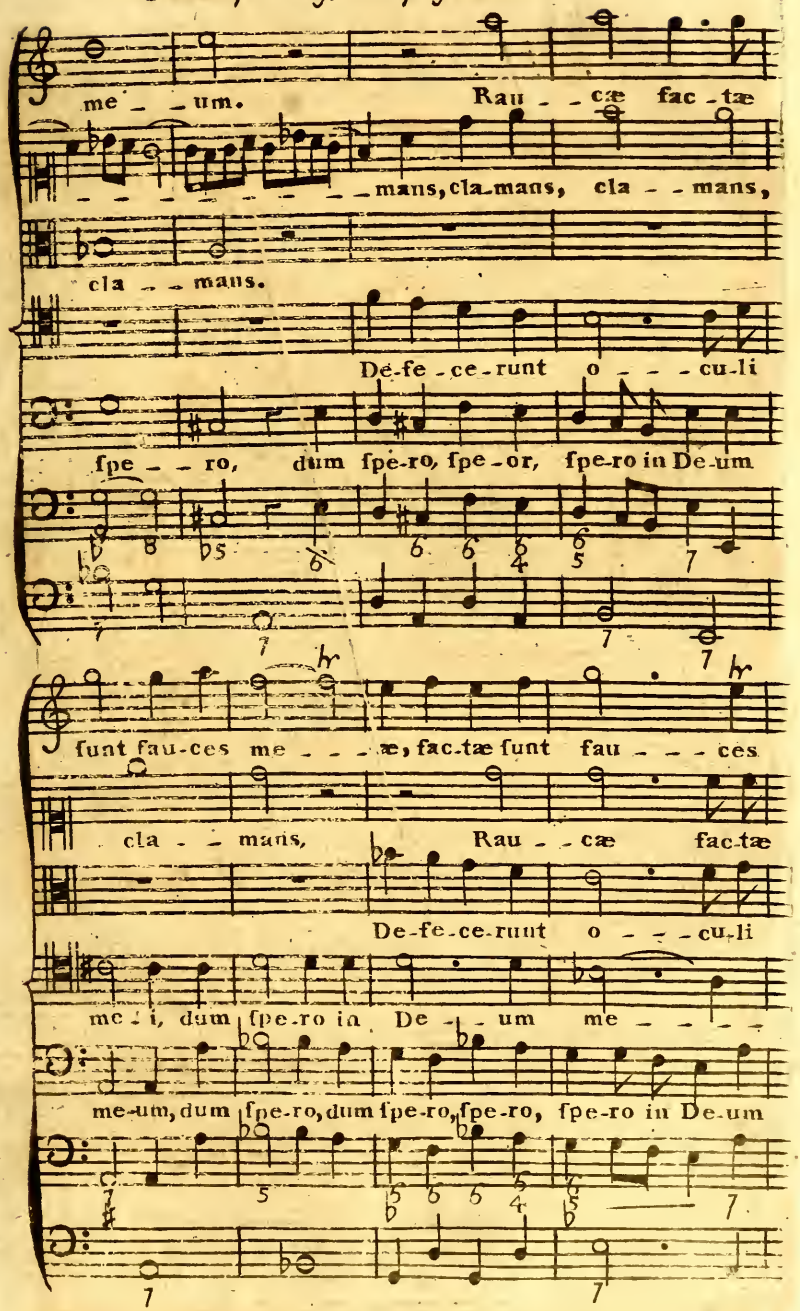
QUINQUE.

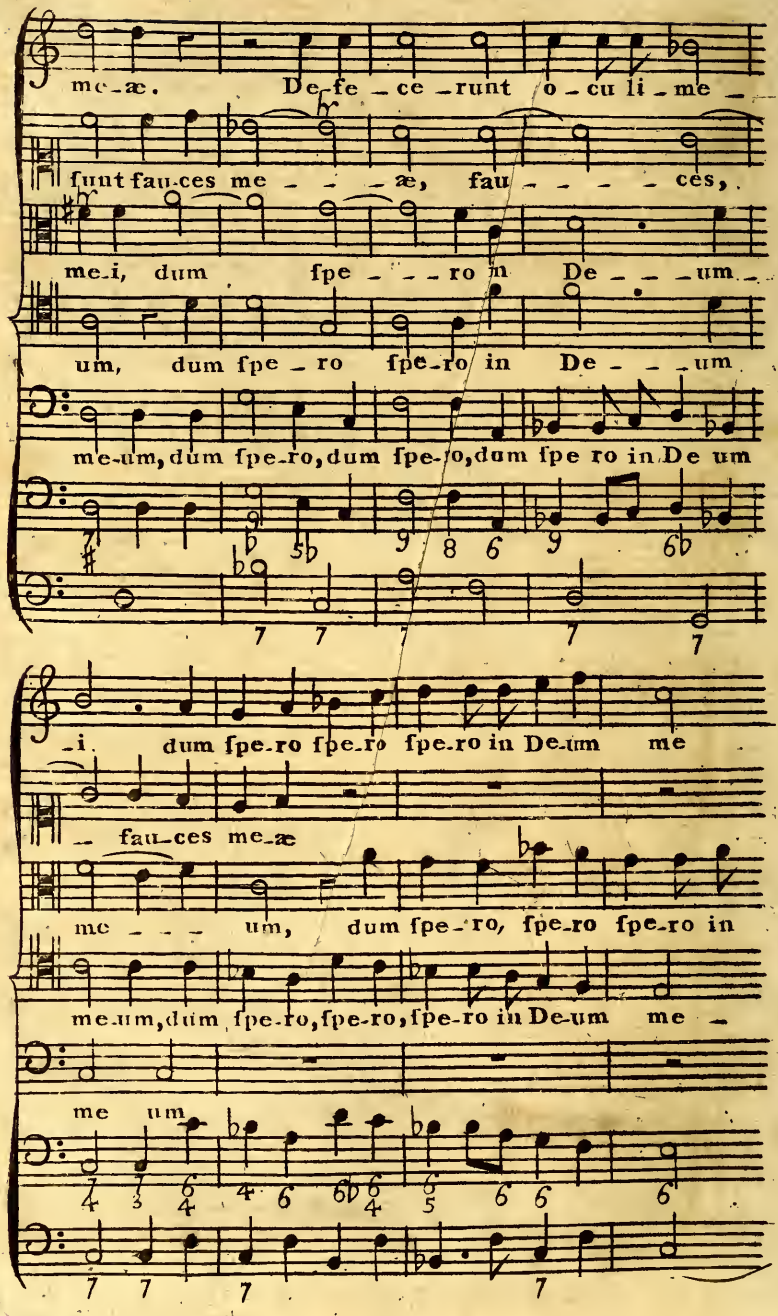

La-bo-ra - - - - - - vi cla - - -
Continued Baſs
Fundamental Baſs
mans, La-bo-ra - - - - - -
La-bo-ra - - - - - - vi cla - - -

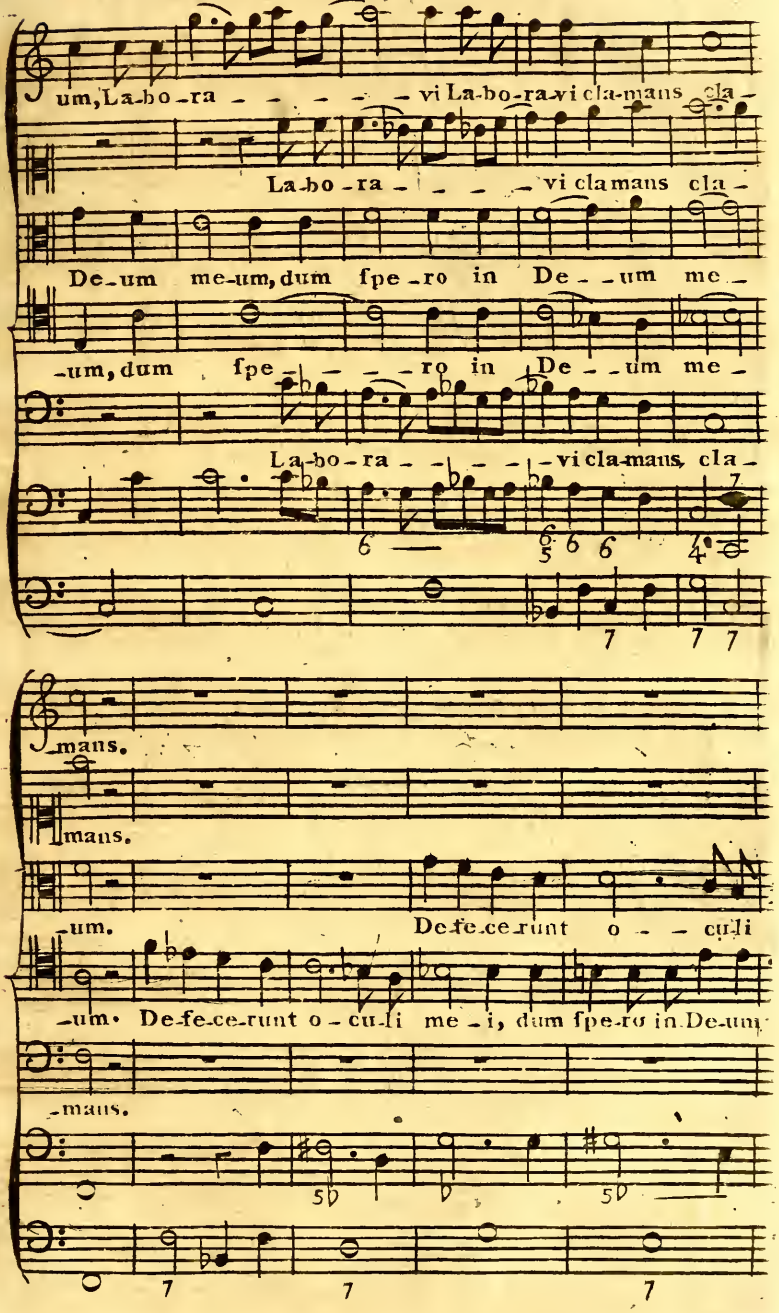

Rau - - cæ fac-tæ ſunt fauces
- vi cla-mans, La-bo-ra-vi cla - -
- - - - - - mans, La-bo-ra-vi, cla - - - mans,
La-bo - ra - - - - - - - vi cla - -
me - - - æ fac tæ ſunt fau-ces me-æ.
mans, Rau - cæ fac-tæ ſunt fau-ces
cla - - - mans,
- - - - mans, cla - - mans, cla - mans, La-bo-
La-bo - ra - - - - - - vi cla - -

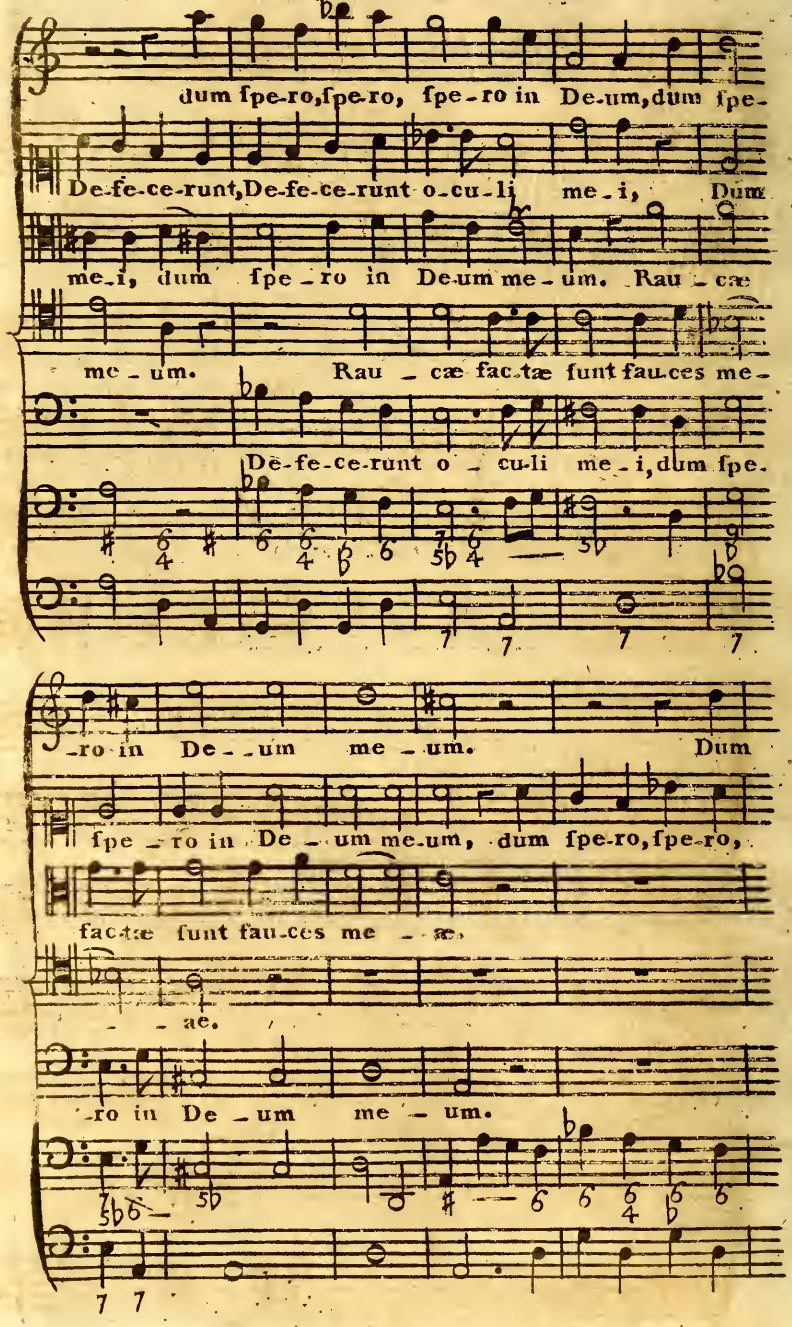

La-bo-ra - - - - - - vi cla - -
me - - - - æ. La-bo - ra - - vi cla - -
Rau - - cæ fac-tæ funt fau-ces
- ra - - - - - - - vi cla - - - mans,
- - - - - - mans, La-bo - ra - - - - - vi
mans,
- - - - - mans, De-fe-ce-runt o - - cu-li
me - - - æ, Fac-tæ funt fau-ces fau-ces me - - æ,
Rau - cæ fac-tæ
cla - - mans.

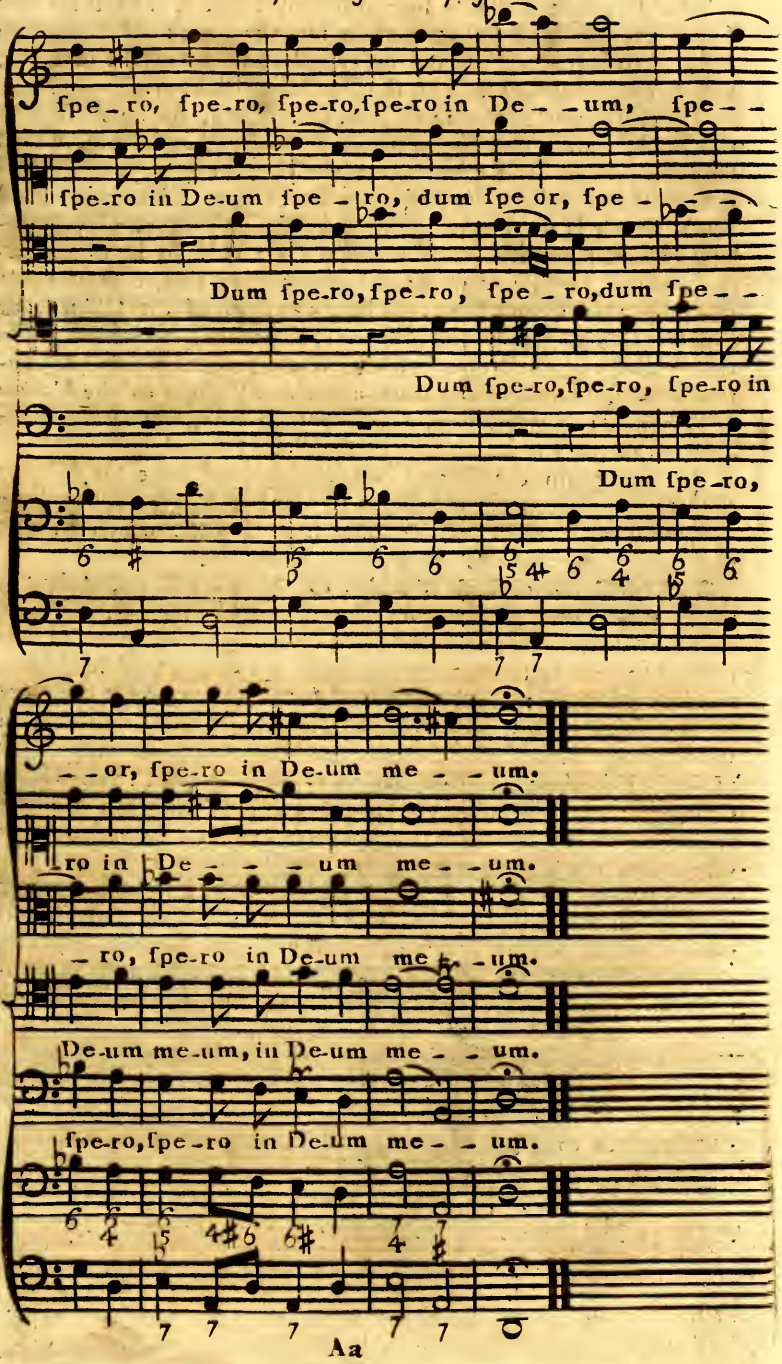

De-fe-ce-runt o-cu-li
me-i, Dum ſpe-ro in De-um me-um, dum ſpe-
La-bo-ra-vi
funt fau-ces me-æ, cla-
Rau-cæ fac-tæ ſunt fau-ces me-æ
me-i, dum ſpe-ro, dum ſpe-ro in De-um
-ro. La-bo-ra-vi cla-
cla-mans, cla-mans,
-mans.
cla-mans, De-fe-ce-runt o-cu-li me-i dum


me - - um. Rau - - cæ fac - tæ
- - - - - - - - - mans, cla-mans, cla - - mans,
cla - - mans.
De-fe-ce-runt o - - - cu-li
ſpe - - ro, dum ſpe-ro, ſpe-or, ſpe-ro in De-um
ſunt fau-ces me - - - æ, fac-tæ ſunt fau - - - ces
cla - - mans, Rau - - cæ fac-tæ
De-fe-ce-runt o - - - cu-li
me - i, dum ſpe-ro in De - - um me - - - -
me-um, dum ſpe-ro, dum ſpe-ro, ſpe-ro, ſpe-ro in De-um


me-æ. De-fe-ce-runt o-cu li-me-
ſunt fau-ces me-æ, fau-ces,
me-i, dum ſpe-ro in De-um
um, dum ſpe-ro ſpe-ro in De-um
me-um, dum ſpe-ro, dum ſpe-ro, dum ſpe ro in De um
-i. dum ſpe-ro ſpe-ro ſpe-ro in De-um me
-fau-ces me-æ
me-um, dum ſpe-ro, ſpe-ro ſpe-ro in
me-um, dum ſpe-ro, ſpe-ro, ſpe-ro in De-um me-
me um


um, La-bo-ra - - - - - vi La-bo-ra vi cla-mans cla-
La-bo-ra - - - - vi cla mans cla-
De-um me-um, dum ſpe-ro in De - - um me-
-um, dum ſpe - - - - ro in De - - um me-
La-bo-ra - - - - - vi cla-mans, cla-
mans.
mans.
-um. De-fe-ce-runt o - - cu-li
-um. De-fe-ce-runt o - cu-li me - i, dum ſpe-ro in De-um
-mans.


dum ſpe-ro, ſpe-ro, ſpe-ro in De-um, dum ſpe-
De-fe-ce-runt, De-fe-ce-runt o-cu-li me-i, Dum
me-i, dum ſpe-ro in De-um me-um. Rau-cæ
me-um. Rau-cæ fac-tæ ſunt fau-ces me-
De-fe-ce-runt o-cu-li me-i, dum ſpe-
-ro in De-um me-um. Dum
ſpe-ro in De-um me-um, dum ſpe-ro, ſpe-ro,
fac-tæ ſunt fau-ces me-æ,
-æ.
-ro in De-um me-um.


ſpe-ro, ſpe-ro, ſpe-ro, ſpe-ro in De- -um, ſpe- -
ſpe-ro in De-um ſpe-ro, dum ſpe or, ſpe-
Dum ſpe-ro, ſpe-ro, ſpe-ro, dum ſpe- -
Dum ſpe-ro, ſpe-ro, ſpe-ro in
Dum ſpe-ro,
-or, ſpe-ro in De-um me- -um.
-ro in De- - -um me- -um.
-ro, ſpe-ro in De-um me- -um.
De-um me-um, in De-um me- -um.
ſpe-ro, ſpe-ro in De-um me- -um.

This Example contains four different Fugues, and there are few Pieces of Muſic that contain more at once: We are often ſatisfied to introduce but one or two, but they may be inverted, which contributes greatly to the Perfection thereof.

The Fugue of *Raucæ factæ ſunt*, &c. which, for an Anſwer at the Fifth, ends almoſt every-where upon the ſecond Note, would be more perfect, if it ended upon the Key-note, as you will find it at that Part where the Baſs takes that Fugue. Yet this ſecond Note, which is there taken, inſtead of the Key-note, may be tolerated, and more eſpecially when we are tied up by other Fugues, which, by Beginning and Ending with this, cannot agree but with this ſecond Note. The Succeſſion of the Chords, or even good Taſte, may alſo oblige us, ſometimes, to interrupt the true Melody of the Fugue; which often proceeds from the Author's Skill, in order to throw a greater Variety in the Courſe of his Piece: Nevertheleſs, this is not allowed, but after all the Subjects of the Fugue have been ſufficiently heard.

To diſtinguiſh the ſeveral Notes which we have the Liberty of paſſing between ſeveral Parts of the Bar for the Sake of the Air, you muſt examine the fundamental Baſs, which in that Caſe, doth not make Harmony with thoſe Notes.

The fundamental Baſs is added to the other Parts, only for the Sake of proving, that, in the whole Courſe of the Piece, there are found but perfect Chords, or that of the Seventh; and that the whole is taken from the Rules we have eſtabliſhed upon thoſe two Chords: Therefore, and for that Reaſon, it muſt not be examined with the other Parts, in reſpect to the Order, or to the Progreſſion of the Concords and Diſcords, but only as to the real Harmony and Foundation of the Chords; this Order or Progreſſion being obſerved and kept, only between the five upper Parts and the continued Baſs; and the Foundation or Ground of the Chords is found in that fundamental Baſs, which contains very near all the ſeveral and different Progreſſions from whence our Rules have been taken, whilſt the other Parts never make but the Octave, the Fifth, the Third, or the Seventh, excepting in the irregular Cadences, and in the Chords by Suppoſition or borrowed.

As we may find as many different Fugues as there are different Airs, it would be impoſſible for us to give Examples of all of them; therefore the Choice muſt be left to the Compoſer's Taſte, provided he obſerves, in all other Reſpects, what we have ſaid as to the Beginning and Ending of them and their Anſwers.

And if you are willing that ſeveral Fugues ſhould be heard together, you muſt pitch upon one, and in this Caſe you may

chuſe

chuſe which you pleaſe; ſo that, if the Melody of one Fugue be agreeable to you, you may add to it three or four Parts, and you may find in theſe Parts the other Fugues. Yet, as ſeveral different Fugues that ſhould begin and end at the ſame Time, and wherein there ſhould happen to be the ſame Number and Value of Notes, would become inſipid, by appearing to be only an Accompaniment one to the other, you muſt endeavour to avoid this Defect, by obſerving the Method we have mentioned in the Paragraph preceding the laſt Example. Words in Proſe, which ſeldom bear the ſame Quality amongſt themſelves, naturally lead us to this Variety, which ought always to be ſought after; but Words in Rhyme, equally meaſured, require a particular Care to begin and end one of thoſe Fugues ſooner or later than the other, and to inſert ſome Diviſions in thoſe that can bear it, in order to introduce a greater Variety, but the whole muſt be done without Confuſion; for the Entries or coming in of each Fugue are to be diſtinctly heard, without claſhing with the other by properly ceaſing, for ſome Space, that Part which is to retake the Fugue, and this Silence or Reſt can be made but upon a Concord or conſonant Note. One Fugue, for the firſt Time that it is heard, muſt not ſerve as a Continuance to the Melody that precedes it, but the Contrary muſt be practiſed with Succeſs, provided that this Fugue hath been heard at leaſt once in every part.

All the Entries of the firſt Fugue may be heard ſeparately from the others; after which you paſs to the Second, to the Third, *&c.* in which Caſe you intermix the firſt Fugue with the new Fugues: You may alſo cauſe each of them to be heard ſeparately one from the other, and intermix them afterwards. If you would uſe ſeveral Fugues together, by placing one of theſe Fugues in one Part, and the other in another Part, it is then difficult to avoid Confuſion. Oftentimes one Subject or Deſign makes us forget the other; yet the Compoſer ought to have them equally in View, and in his Mind. It is, therefore, by the Variety of Deſigns, or Subjects, by giving them oppoſite Progreſſions, by cauſing them to enter into different Parts of the Bar, *&c.* that you may cauſe each Fugue to be heard. It often happens, that one Part may ſing two Fugues ſucceſſively, which at firſt appeared but one, and which afterwards may be divided into two, which produces alſo a very agreeable Effect; but, in that Caſe, the ſecond Part that retakes theſe Fugues, ought to begin immediately at the Place where they may be divided, though one may anticipate or poſtpone that Entry for ſome Parts of a Bar, and even for more than a Bar.

The ſame Number of Reſts, or of Bars contained in the firſt Part that retakes the Fugue, muſt be obſerved in the next Part, that is to ſay, that, if the firſt Part that retakes the Fugue hath reckoned one Bar, each of the other Parts are to reckon the like Number of Bars after that which immediately precedes it. This Rule, nevertheleſs, is not ſo general, but that it may be treſpaſſed upon ſometimes; and we think, that the third Part that retakes the Fugue, may be poſtponed or advanced for a Bar: So that, if the ſecond Part hath reckoned two Bars, the third Part may reckon but one, or three after the ſecond Part, and ſo of the others which repeat this Fugue in the Uniſon, or at the Octave, after the third Part; for as the Fifth is to anſwer the Key-note, and the ſecond Note the Sixth, *&c.* what may agree one Way, after the End of one or two Bars, may poſſibly not agree with the other, after a like Number of Bars. It would be, therefore, reſtraining too much the Genius of an Author, by keeping him within the Bounds of the firſt Limits; and ſuch as will not agree to this, will find a thouſand Deſigns or Subjects where it may happen, that not one of them can be ſubjected to this ſtrict Regularity. See, upon this Subject, the Fugues of *Raucæ factæ ſunt*, and of *Defecerunt oculi mei*, in the laſt Example.

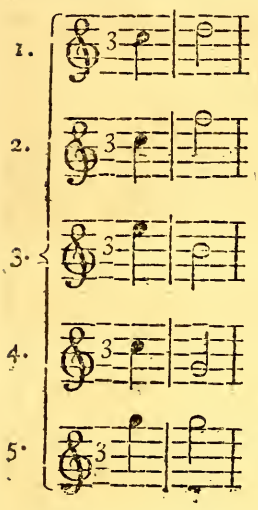
When all the Parts ceaſe together, in order that a new Fugue may appear in a better Light, the Subject muſt never appear as if it was abſolutely ended, for we muſt always make the Auditor to expect as much as poſſible what we intend for him, and, to that End, this Reſt or Silence ought to be uſed but in falſe or irregular Cadences; and, if they be perfect Cadences, it muſt, at leaſt, be in a foreign Key, as we have obſerved it in all the like Caſes.

A Fugue is an Ornament in Muſic, founded upon good Taſte; ſo that the moſt general Rules we have given, are hardly ſufficient to ſucceed perfectly in it. The various Sentiments and Events that can be expreſſed in Muſic, introduce every Moment a Novelty which cannot be reduced to fixed Rules. It is true, that a perfect Knowledge of Harmony diſcovers to us the Roads we ſhould take in this Caſe; but the Choice of thoſe Roads depends upon our Taſte, and this Taſte requires an Experience, which cannot be attained to but by Practice, and by ſtudying and hearing the Works of the beſt and moſt ſkilful Maſters in this Kind.

There is another Species of Fugue, called Perpetual, or Canon, which conſiſts in an entire Air, the Subject of which is to be repeated regularly by all the Parts.

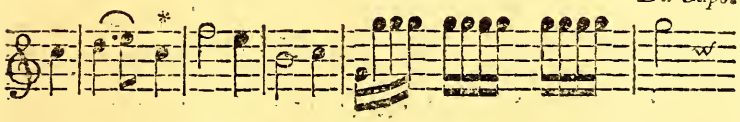
The

The moſt common are taken in the Uniſon, or at the Octave, according to the Extent of the Voices or Inſtruments; and for that Purpoſe you may compoſe a Subject at Pleaſure, to which you add as many Parts as you think proper; and, of all theſe Parts, you compoſe an entire Air, which is ſo contrived, that the Melody of one Part may ſerve as a Continuance to the other; after which this Air begins by one of thoſe Parts which is immediately followed by another, at the Time that the firſt Subject is ended; thus each Part follows the other, and, when the Firſt is at an End, it begins again, being always followed by the others, as at firſt, provided that each Part began at its proper place. See the Example at the Side.



Suppoſing that you had imagined one of the Subjects contained in each of theſe five Parts, you might eaſily add the others, and from thence make an entire Air, in which conſiſts all the Difficulty of this Canon, of which this is the Air.

Da Capo.



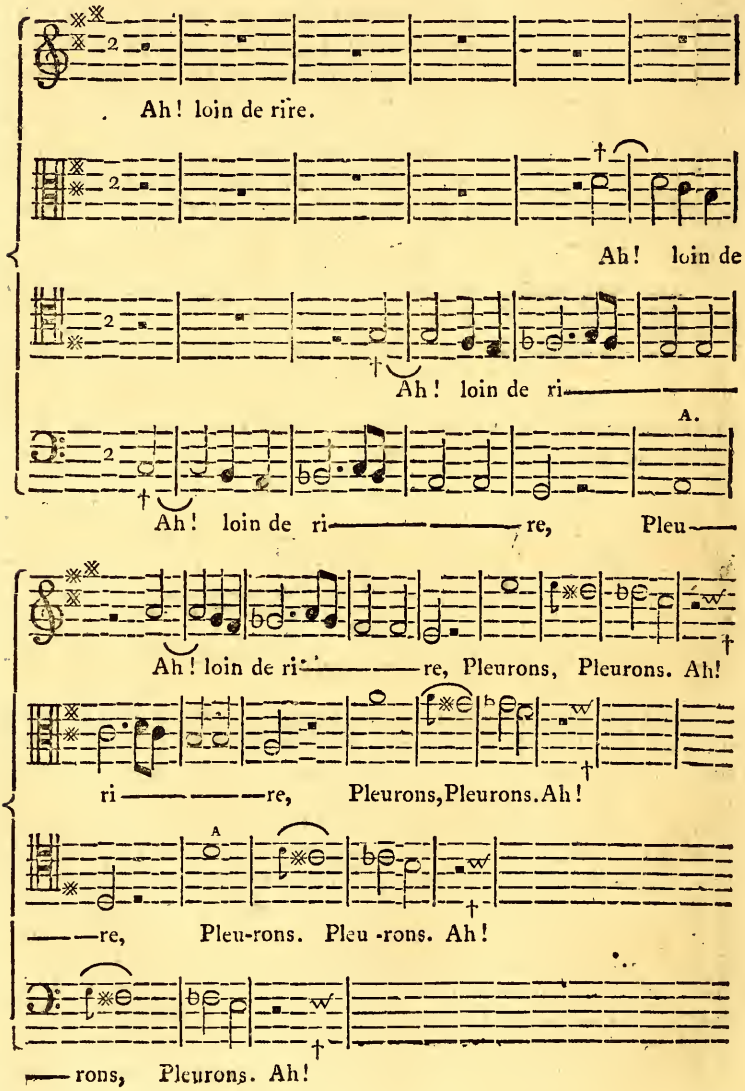
Re—veill ez vous dor--meur ſans fin, Relindindin, Relindindin, Relindindin, Re—

The Melody of thoſe five Parts is very obvious in this Canon; we have only added ſome Notes for the Sake of the Air; and each of theſe Parts is to begin the Air one after the other, when the preceding Part is at the Mark*.

This perpetual Fugue may alſo be taken at the Fifth or at the Fourth; but then, in this Caſe, the entire Air muſt be framed, and proper Sharps and Flats (as the Caſe requires) are to be added to thoſe Notes, of which the natural Degrees would hinder thoſe Parts that repeat the Air to be entirely conformable to the firſt Subject, without obſerving any Modulation, but only the Melody, which makes it the more difficult; for, every Time that a Part takes the Fugue, it goes into a new Key, which is at the Fifth, if the Fugue is taken at the Fifth; and at the Fourth, if it be taken at the Fourth. If the Number of Parts is unli-

mitted in the foregoing Canon, we believe that in this there cannot be uſed more than four Parts, ſince there hath not hitherto appeared any of this Sort in four Parts.

Canon at the Fifth.



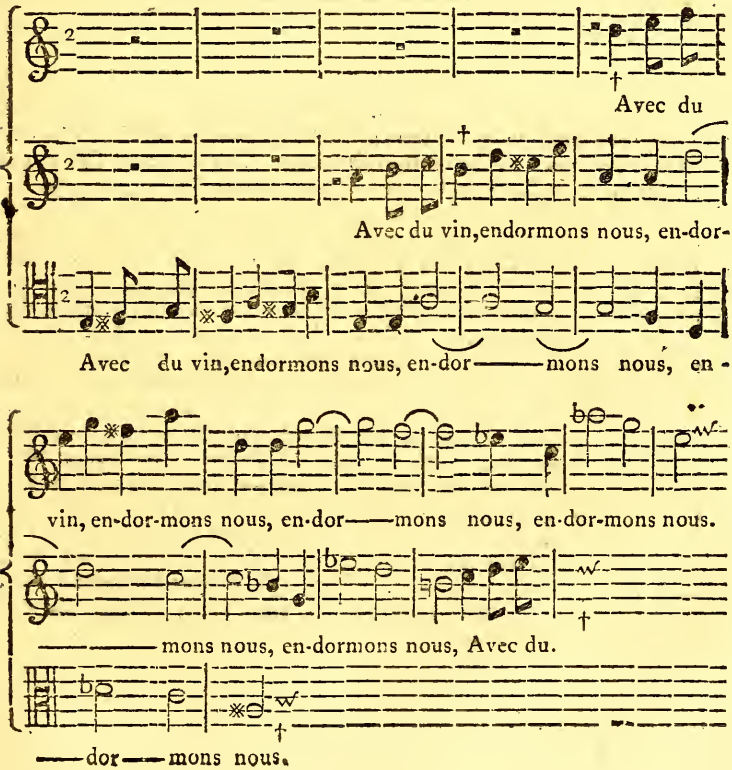
If

If the Voice cannot reach the Note marked *A*, the Uniſon of the preceding Note may be taken.

When a Canon is ſaid to be at the Fifth, it is to be underſtood above; ſo that a Fifth above, or a Fourth below, is the ſame Thing; and this is to be allowed, eſpecially, for the Conveniency of Voices.

We have placed the four Parts together, becauſe it would have been difficult to have judged of it otherwiſe. Though we might only have given Notice, that each Part is to be taken at the Fifth of that which precedes it after two complete Bars; and though the Guides ~ which ſhew where it muſt begin again, are not upon the Space or Line which refers you to the Mark †, one muſt, nevertheleſs, follow and continue in the ſame Key deſigned by the Guide ~, by imagining a new Key, or, rather, imagining that the Key hath changed, as it really does; but that the Modulation of the Melody which is found at the Mark †, is always the ſame: Thus you may continue as long as you think proper.

Canon at the Fourth.



It is difficult to compoſe theſe two Sorts of Canons, unleſs you have a thorough Knowledge of inverted Chords; and you muſt avoid uſing (as much as you can) the Fifth, the Fourth, and the Eleventh.

The beſt Method to make a quick Progreſs in Compoſition, is to apply and ſtick cloſely to Modulation, and to the fundamental Harmony, which are the principal and only Cauſe of all that Variety that may be therein introduced, by inverting that ſame fundamental Harmony, the Modulation whereof never changes.

F I N I S.

E R R A T A.

Page 6, the Direct in the Tenor at Bottom ſhould be on C. The Cliff in the firſt Baſs muſt be on the third Line. The Direct at Top F, and at Bottom G.—Page 17, Counter Tenor, ſeventh Bar, a 3 over the firſt Note.—Page 21, Baſs ſeventh Bar B under the firſt Note.—Page 62, eighth Stave the F Cliff on the fourth Line. Third Bar ſecond Note, B on the ſecond Line, not F.—Page 68, Example of A Flat muſt have B, E, D and F Flat.—Page 77, the firſt Stave, the 7 over the ſecond Note in the ſeventh Bar muſt be out, and 7 put over the firſt Note in the eighth Bar. The fourth Stave, the firſt Note in the ninth Bar muſt be B on the ſecond Line.—Page 96, the third, fourth, and fifth Stave, the F Cliff muſt be on the fourth Line, not on the Third.—Page 111, the ſecond Note in the firſt Bar ſhould be D.—Page 122, the laſt Example, the fourth Note D in the ſecond Bar, ſhould be a Crotchet.—Page 123, the laſt Example, the ſecond Note E in the ſecond Bar muſt be a Quaver.—Page 125, the ſixth Bar the ſecond Note in the Baſs muſt be B.—Page 131, the ſecond Stave, the ſecond Note in the ſeventh Bar muſt have a 6 over it inſtead of a 5.—Page 136, the ſecond Stave, the fifth Bar, the ſecond Note muſt be C in the ſecond Space.—Page 138, F over the ſecond Note in the ſixth Bar, of the ſecond Part in the Treble, C over the firſt Note in the ſeventh Bar.

MALCOLM's

TREATISE

OF

MUSIC,

Speculative, Practical, and Hiſtorical.

CORRECTED AND ABRIDGED

By an Eminent MUSICIAN.

SECOND EDITION.

Hail Sacred Art! deſcended from above,
To crown our mortal Joys: Of thee we learn,
How happy Souls communicate their Raptures;
For thour't the Language of the Bleſt in Heaven.

——————— Divum hominumque voluptas.

LONDON,

PRINTED FOR J. MURRAY, N°. 32, FLEET-STREET; AND LUKE WHITE, DUBLIN.

MDCCLXXIX.

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A

TREATISE

OF

MUSIC.

Of SOUND: the CAUSE of it; and the various Affections of it concerned in MUSIC.

MUSIC is a ſcience of ſounds, whoſe end is pleaſure. Sound is the object in general; or, to ſpeak with the philoſophers, it is the material object. But it is not the buſineſs of muſic, taken in a ſtrict and proper ſenſe, to conſider every phenomenon and property of ſound; that belongs to a more univerſal philoſophy: yet, that we may underſtand what it is in ſounds upon which the formality of muſic depends, *i. e.* whereby it is diſtinguiſhed from other ſciences, of which ſound may alſo be the object: or, what it is in ſounds that makes the particular and proper object of muſic, whereby it obtains its end; we muſt a little conſider the nature of ſound.

So undis a word that ſtands for every perception that comes by the ear immediately. And for the nature of the thing, it is now generally agreed upon among philoſophers, and alſo confirmed by experience, to be the effect of the mutual colliſion, and conſequent tremulous motion in bodies com-

municated to the circumambient fluid of air, and propagated through it to the organs of hearing.

A treatiſe that were deſigned for explaining the nature of ſound univerſally, in all its known and remarkable phænomena, ſhould, no doubt, examine very particularly every thing that belongs to the cauſe of it; firſt, The nature of that kind of motion in bodies (excited by their mutual percuſſion) which is communicated to the air; then, how the air receives and propagates that motion to certain diſtances: And, laſtly, How that motion is received by the ear, explaining the ſeveral parts of that organ, and their offices, that are employed in hearing. But as the nature and deſign of what I propoſe and have eſſayed in this treatiſe, does not require ſo large an account of ſounds, I muſt be content only to conſider ſuch phænomena as belong properly to muſic, or ſerve for the better underſtanding of it. In order to which I ſhall a little farther enlarge the preceding general account of the cauſe of ſound. And,

Firſt, That motion is neceſſary in the production of ſound, is a concluſion drawn from all our experience. Again, that motion exiſts, firſt among the ſmall and inſenſible parts of ſuch bodies as are ſonorous, or capable of ſound; excited in them by mutual colliſion and percuſſion, one againſt another, which produces that tremulous motion ſo obſervable in bodies, eſpecially that have a free and clear ſound, as bells, and the ſtrings of muſical inſtruments; then this motion is communicated to, or produces a like motion in the air, or ſuch parts of it as are apt to receive and propagate it: for no motion of bodies at diſtance can affect our ſenſes (or move the parts of our bodies) without the mediation of other bodies, which receive theſe motions from the ſonorous body, and communicate them to the organs of ſenſe; and no other than a fluid can reaſonably be ſuppoſed. But we know this alſo by experience; for a bell in the exhauſted receiver of an air-pump can ſcarcely be heard, which was loud enough before the air was drawn out. In the laſt place, this motion muſt be communicated to thoſe parts of the ear that are the proper and immediate inſtruments of hearing. The mechaniſm of this noble organ has ſtill great difficulties, which all the induſtry of the moſt capable and curious enquirers has not ſurmounted: there are queſtions all unſolved about the uſe of ſome parts, and perhaps other neceſſary parts never yet diſcovered: but the

the moſt important queſtion among the learned is about the laſt and immediate inſtrument of hearing, or that part which laſt receives the ſonorous motion, and finiſhes what is neceſſary on the part of the organ. Conſult theſe with the philoſophers and anatomiſts; I ſhall only tell you the common opinion, in ſuch general terms as my deſign permits, thus: Next to the external viſible cavity or paſſage into the ear, there is a cavity, of another form, ſeparate from the former by a thin membrane, or ſkin, which is called the tympan or drum of the ear, from the reſemblance it has to that inſtrument: within the cavity of this drum there is always air, like that external air which is the medium of ſound. Now, the external air makes its impreſſion firſt on the membrane of the drum, and this communicates the motion to the internal air, by which it is again communicated to other parts, till it reaches at laſt to the auditory nerve, and there the ſenſation is finiſhed, as far as matter and motion are concerned; and then the mind, by the laws of its union with the body, has that idea we call ſound. It is a curious remark, that there are certain parts fitted for the bending and unbending of the drum of the ear, in order, very probably, to the perceiving ſounds that are raiſed at greater or leſſer diſtances, or whoſe motions have different degrees of force, like what we are more ſenſible of in the eye, which by proper muſcles (which are inſtruments of motion) we can move outwards or inwards, and change the very figure of, that we may better perceive very diſtant or near objects. But I have gone far enough in this.

Leſt what I have ſaid of the cauſe of ſound be too general, particularly with reſpect to the motion of the ſonorous body, which I call the original cauſe, let us go a little farther with it. That motion in any body, which is the immediate cauſe of its ſounding, may be owing to two different cauſes; one is, the mutual percuſſion betwixt it and another body, which is the caſe of drums, bells, and the ſtrings of muſical inſtruments, &c. Another cauſe is, the beating or daſhing of the ſonorous body and the air immediately againſt one another, as in all kind of wind-inſtruments, flutes, trumpets, hautboys, &c. Now in all theſe caſes, the motion which is the conſequence of the mutual percuſſion betwixt the whole bodies, and is the immediate cauſe of the ſonorous motion which the air conveys to our ears, is an inviſible

tremulous or undulating motion in the ſmall and inſenſible parts of the body. To explain this;

All viſible bodies are ſuppoſed to be compoſed of a number of ſmall and inſenſible parts, which are of the ſame nature in every body, being perfectly hard and incompreſſible: of theſe infinitely little bodies are compoſed others that are ſomething greater, but ſtill inſenſible, and theſe are different, according to the different figures and union of their component parts: theſe are again ſuppoſed to conſtitute other bodies greater (which have greater differences than the laſt) whoſe different combinations do, in the laſt place, conſtitute thoſe groſs bodies that are viſible and touchable. The firſt and ſmalleſt parts are abſolutely hard; the others are compreſſible, and are united in ſuch a manner, that being, by a ſufficient external impulſe, compreſſed, they reſtore themſelves to their natural, or ordinary ſtate: this compreſſion therefore happening upon the ſhock or impulſe made by one body upon another, theſe ſmall parts or particles, by their reſtitutive power (which we alſo call elaſtic faculty) move to and again with a very great velocity or ſwiftneſs, in a tremulous and undulating manner, ſomething like the viſible motions of groſſer ſprings, as the chord of a muſical inſtrument; and this is what we may call the ſonorous motion which is propagated to the ear. But obſerve that it is the inſenſible motion of theſe particles next to the ſmalleſt, which is ſuppoſed to be the immediate cauſe of ſound; and of theſe, only thoſe next the ſurface can communicate with the air; their motion is performed in very ſmall ſpaces, and with extreme velocity; the motion of the whole, or of the greater parts being no further concerned than as they contribute to the other.

And this is the hypotheſis upon which Monſieur Perrault, of the Royal Society in France, explains the nature and phenomæna of ſound, in his curious treatiſe upon that ſubject, "Eſſais de Phyſique," tom. 2. Du Bruit. How this theory is ſupported I ſhall briefly ſhew, while I conſider a few applications of it.

Of thoſe hard bodies that ſound by percuſſion of others, let us conſider a bell: ſtrike it with any other hard body, and while it ſounds we can diſcern a ſenſible tremor in the ſurface, which ſpreads more ſenſibly over the whole, as the ſhock is greater. This motion is not only in the parts next the ſurface, but in all the parts through the whole

ſolidity, becauſe we can perceive it alſo in the inner ſurface of the bell, which muſt be by communication with thoſe parts that are immediately touched by the ſtriking body. And this is proved by the ceaſing of the ſound when the bell is touched in any other part; for this ſhews the eaſy and actual communication of the motion. Now this is plainly a motion of the ſeveral ſmall and inſenſible parts changing their ſituations with reſpect to one another, which being ſo many, and ſo cloſely united, we cannot perceive their motions ſeparately and diſtinctly, but only that trembling which we reckon to be the effect of the confuſion of an infinite number of little particles ſo cloſely joined and moving in infinitely ſmall ſpaces. Thus far any body will eaſily go with the hypotheſis: but Monſieur Perrault carries it farther, and affirms, That that viſible motion of the parts is no otherwiſe the cauſe of the ſound than as it cauſes the inviſible motion of the yet ſmaller parts (which he calls particles, to diſtinguiſh them from the other which he calls parts, the leaſt of all being with him corpuſcles) And this he endeavours to prove by other examples, as of chords and wind-inſtruments. Let us conſider them.

Take a chord or ſtring of a muſical inſtrument, ſtretched to a ſufficient degree for ſounding, when it is fixt at both ends, we make it ſound by drawing the chord from its ſtrait poſition, and then letting it go; (which has the ſame effect as what we properly call percuſſion) the parts by this drawing, whereby the whole is lengthned, being put out of of their natural ſtate, or that which they had in the ſtrait line, do by their elaſticity reſtore themſelves, which cauſes that vibratory motion of the whole, whereby it moves to and again beyond the ſtrait line, in vibrations gradually ſmaller, till the motion ceaſe and the chord recover its former poſition. Now the ſhorter the chord is, and the more it is ſtretched in the ſtrait line, the quicker theſe vibrations are: but however quick they are, Monſieur Perrault denies them to be the immediate cauſe of the ſound; becauſe, ſays he, in a very long chord, and not very ſmall, ſtretched only ſo far as that it may give a diſtinct ſound, we can perceive with our eye, beſides the vibrations of the whole chord, a more confuſed tremor of the parts, which is more diſcernible towards the middle of the chord, where the parts vibrate in greater ſpaces in the motion of the whole; this laſt motion of the parts which is cauſed by the firſt vibrations of

the

the whole, does again occaſion a motion in the leſſer parts or particles, which is the immediate cauſe of the ſound. And this he endeavours to confirm by this experiment, *viz.* Take a long chord (he ſays, he made it with one of thirty foot) and make it ſound; then wait till the ſound quite ceaſe, and then alſo the viſible undulations of the whole chord will ceaſe: if immediately upon this ceaſing of the ſound, you approach the chord very ſoftly with the nail of your finger, you will perceive a tremulous motion in it, which is the remaining ſmall vibrations of the whole chord, and of the parts cauſed by the vibrations of the whole. Now theſe vibrations of the parts, are not the immediate cauſe of ſound; elſe how comes it that while they are yet in motion they raiſe no ſound? The anſwer perhaps is this, That the motion is become too weak to make the ſound to be heard at any great diſtance, which might be heard were the tympan of the ear as near as the nail of the finger, by which we perceive the motion. But to carry off this, Mr. Perrault ſays, That as ſoon as this ſmall motion is perceived, we ſhall hear it ſound; which is not occaſioned by renewing or augmenting the greater vibrations, becauſe the finger is not ſuppoſed to ſtrike againſt the chord, but this againſt the finger, which ought rather to ſtop that motion; the cauſe of this renewed ſound therefore is probably, that this weak motion of the parts, which is not ſufficient to move the particles (whoſe motion is the firſt that ceaſes) receives ſome aſſiſtance from the daſhing againſt the nail, whereby they are enabled to give the particles that motion which is neceſſary for producing the ſound. But leſt it ſhould ſtill be thought, that this encounter with the nail may as well be ſuppoſed to increaſe the motion of the parts to a degree fit for ſounding, as to make them capable of moving the particles; we may conſider, that the particles being at reſt in the parts, and having each a common motion with the whole part, may very eaſily be ſuppoſed to receive a proper and particular motion by that ſhock; in the ſame manner that bodies which are relatively at reſt in a ſhip, will be ſhaken and moved by the ſhock of the ſhip againſt any body that can any thing conſiderably oppoſe its motion. Now for as ſimple as this experiment appears to be, I am afraid it cannot be ſo eaſily made as to give perfect ſatisfaction, becauſe we can hardly touch a ſtring with our nail but it will ſound.

But

But Mr. Perrault finiſhes the proof of his hypotheſis by the phænomena of wind-inſtruments. Take for example a flute; we make it ſound by blowing into a long, broad, and thin canal, which conveys the air thrown out of the lungs, till it is daſhed againſt that thin ſolid part which we call the tongue, or wind-cutter, that is oppoſite to the lower orifice of the foreſaid canal; by which means the particles of that tongue are compreſſed, and by their reſtitutive motion, they communicate to the air a ſonorous motion, which being immediately thrown againſt the inner concave ſurface of the flute, and moving its particles, the motion communicated to the air, by all theſe particles both of the tongue and inner ſurface, makes up the whole ſound of the flute.

Now to prove that only the very ſmall particles of the inner ſurface and edge of the tongue are concerned in the ſound of the flute, we muſt conſider, that flutes of different matter, as metal, wood, or bone, being of the ſame length and bore, have none, or very little ſenſible difference in their ſound; nor is this ſenſibly altered by the different thickneſs of the flute betwixt the outer and inner ſurface; nor in the laſt place, is the ſound any way changed by touching the flute, even though it be hard preſſed, as it always happens in bells and other hard bodies that ſound by mutual percuſſion. All this Mr. Perrault accounts for by his hypotheſis, thus: he tells us, That as the corpuſcles are the ſame in all bodies, the particles which they immediately conſtitute, have very ſmall differences in their nature and form; and that the ſpecific differences of viſible bodies, depend on the differences of the parts made up of theſe particles, and the various connection of theſe parts, which make them capable of different modifications of motion. Now, hard bodies that ſound by mutual percuſſion one againſt another, owe their ſounding to the vibrations of all their parts, and by theſe to the inſenſible motions of their particles; but according to the differences of the parts and their connections, which make them, either ſilver, or braſs, or wood, &c. ſo are the differences of their ſounds. But in wind-inſtruments (for example, flutes) as there are no ſuch remarkable differences anſwering to their matter, their ſound can only be owing to the inſenſible motion of the particles of the ſurface: for theſe being very little difference in all bodies, if we ſuppoſe the ſound is owing to their motions only, it can have none, or very ſmall differences: and becauſe we find this true in fact, it makes the hypotheſis extremely probable. I have never in-

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deed ſeen flutes of any matter but wood, except of the ſmall kind we call flagellets, of which I have ſeen ivory ones, whoſe ſound has no remarkable difference from a wooden one; and therefore I muſt leave ſo much of this proof upon Monſieur Perrault's credit. As to the other part, which is no leſs conſiderable, that no compreſſion of the flute can ſenſibly change its ſound, it is certain, and every body can eaſily try it. To which we may add, That flutes of different matter are ſounded with equal eaſe, which could not well be if their parts were to be moved; for in different bodies theſe are differently moveable. But I muſt make an end of this part, in which I think it is made plain enough, that the motion of a body which cauſes a ſounding motion in the air, is not any motion which we can poſſibly give to the whole body, wherein all the parts are moved in one common direction and velocity; but it is the motion of the ſeveral ſmall and undiſtinguiſhable parts, which being compreſſed by an external force, do, by their elaſtic power, reſtore themſelves, each by a motion particular and proper to itſelf. But whether you will diſtinguiſh parts and particles as Mr. Perrault does, I leave to yourſelves, my deſign not requiring any accurate determination of this matter. And now to come nearer to our ſubject, I ſhall next conſider the differences and affections of ſounds that are any way concerned in muſic.

Sounds are as various, or have as many differences, as the infinite variety of things that concur in their production; which may be reduced to theſe general heads: Firſt, The quantity, conſtitution, and figure of the ſonorous body; with the manner of percuſſion, and the conſequent velocity of the vibrations of the parts of the body and the air; alſo their equality and uniformity, or inequality and irregularneſs. Secondly, The conſtitution and ſtate of the fluid medium through which the motion is propagated. Thirdly, The diſpoſition of the ear that receives that motion. And, fourthly, The diſtance of the ear from the ſonorous body. To which we may add, laſtly, The conſideration of the obſtacles that interpoſe betwixt the ſonorous body and the ear; with other adjacent bodies that, receiving an impreſſion from the fluid ſo moved, re-act upon it, and give new modification to the motion, and conſequently to the ſound. Upon all theſe do our different perceptions of ſound depend.

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The variety and differences of ſounds, owing to the various degrees and combinations of the conditions mentioned, are innumerable; but to our preſent deſign we are to conſider the following diſtinctions.

1. Sounds, come under the ſpecific diſtinction, according to the kinds of bodies from which they proceed: thus metal is eaſily diſtinguiſhed from other bodies by the ſound; and among metals there is great difference of ſound, as is diſcernible, for example, betwixt gold, ſilver and braſs. And for the purpoſe in hand, a moſt notable difference is that of ſtringed and wind-inſtruments of muſic, of which there are alſo ſub-diviſions: theſe differences depend, as has been ſaid, upon the different conſtitutions of theſe bodies; but they are not ſtrictly within the conſideration of muſic, not the mathematical part of it at leaſt, though they may be brought into the practical; of which afterwards.

2. Experience teaches us, that ſome ſounds can be heard, by the ſame ear, at greater diſtances than others; and when we are at the ſame diſtance from two ſounds, I mean from the ſonorous body or the place where the ſound firſt riſes, we can determine (for we learn it by experience and obſervation) which of the two will be heard fartheſt: by this compariſon we have the idea of a difference whoſe oppoſite terms are called loud and low (or ſtrong and weak.) This difference depends both upon the nature of different bodies, and upon other accidental circumſtances, ſuch as their figure; or the different force in the percuſſion; and frequently upon the nature of the circumjacent bodies, that contribute to the ſtrengthening of the ſound, that is a conjunction of ſeveral ſounds ſo united as to appear only as one ſound: but as the union of ſeveral ſounds gives occaſion to another diſtinction, it ſhall be conſidered again, and we have only to obſerve here that it is always the cauſe of loudneſs; yet this difference belongs not ſtrictly to the theory of muſic, though it is brought into the practice, as that in the firſt article.

3. There is an affection or property of ſound, whereby it is diſtinguiſhed into acute, ſharp or high; and grave, flat or low. The idea of this difference you will get by comparing ſeveral ſounds or notes of a muſical inſtrument, or of a human voice ſinging. Obſerve the term *low*, is ſometimes oppoſed to loud, and ſometimes to acute, which yet are very different things: loudneſs is very well meaſured by the

diſtance or ſphere of audibility, which makes the notion of it very clear. Acuteneſs, is ſo far different, that a voice or ſound may aſcend or riſe in degree of acuteneſs, and yet loſe nothing of its loudneſs, which can eaſily be demonſtrated upon any inſtrument, or even in the voice; and particularly if we compare the voice of a boy and a man.

This relation of acuteneſs and gravity is one of the principal things concerned in muſic, the nature of which ſhall be particularly conſidered afterwards; and I ſhall here obſerve that it depends altogether upon the nature of the ſonorous body itſelf, and the particular figure and quantity of it; and in ſome caſes upon the part of the body where it is ſtruck. So that, for example, the ſounds of two bells of different metals, and the ſame ſhape and dimenſions, being ſtruck in the ſame place, will differ as to acuteneſs and gravity; and two bells of the ſame metal will differ in acuteneſs, if they differ in ſhape or in magnitude, or be ſtruck in different parts: ſo in chords, all other things being equal, if they differ either in matter, or dimenſions, or the degree of tenſion, as being ſtretched by different weights, they will alſo differ in acuteneſs.

But we muſt carefully remark, that acuteneſs and gravity, alſo loudneſs and lowneſs are but relative things; ſo that we cannot call any ſound acute or loud, but with reſpect to another which is grave or low in reference to the former; and therefore the ſame ſound may be acute or grave, alſo loud or low in different reſpects. Again, theſe relations are to be found not only between the ſounds of different bodies, but alſo between different ſounds of the ſame body, for different force in the percuſſion will cauſe a louder or lower ſound, and ſtriking the body in different parts will make an acuter or graver ſound, as we have remarkably demonſtrated in a bell, which as the ſtroke is greater gives a greater or louder ſound, and being ſtruck nearer the open end, gives the graver ſound. How theſe degrees are meaſured, we ſhall learn again, only mind that theſe degrees of acuteneſs and gravity are alſo called different and diſtinguiſhable tones or tunes of a voice or ſound; ſo we ſay one ſound is in tune with another when they are in the ſame degree: acute and grave being but relations, we apply the name of tune to them both, to expreſs ſomething that is conſtant and abſolute which is the ground of the relation; in like manner as we apply the name *magnitude* both to the things we call great

great and little, which are but relative ideas: each of them have a certain magnitude, but only one of them is great and the other little when they are compared; ſo of two ſounds each has a certain tune, but only one is acute and the other grave in compariſon.

4. There is a diſtinction of ſounds, whereby they are denominated long or ſhort; which relates to the duration, or continued, and ſenſibly uninterrupted exiſtence of the ſound. This is a thing of very great importance in muſic; but to know how far, and in what reſpect it belongs to it, we muſt diſtinguiſh betwixt the natural and artificial duration of ſound. I call that the natural duration or continuity of ſound, which is leſs or more in different bodies, owing to their different conſtitutions, whereby one retains the motion once received longer than another does; and conſequently the ſound continues longer (though gradually weaker) after the external impulſe ceaſes; ſo bells of different metals, all other things being equal and alike, have different continuity of ſound after the ſtroke: And the ſame is very remarkable in ſtrings of different matter: there is too a difference in the bell or ſtring, according to the force of the percuſſion. This continuity is ſometimes owing to the ſudden reflection of the ſound from the ſurface of neighbouring bodies, which is not ſo properly the ſame ſound continued, as a new ſound ſucceeding the firſt ſo quickly as to appear to be only its continuation: But this duration of ſound does not properly belong to muſic, wherefore let us conſider the other. The artificial continuity of ſound is, that which depends upon the continued impulſe of the efficient cauſe upon the ſonorous body for a longer or ſhorter time, ſuch are the notes of a voice or any wind-inſtrument, which are longer or ſhorter as we continue to blow into them; or, the notes of a violin and all ſtringed inſtruments that are ſtruck with a bow, whoſe notes are made longer or ſhorter by ſtrokes of different lengths or quickneſs of motion; for a long ſtroke, if it is quickly drawn, may make a ſhorter note than a ſhort ſtroke drawn ſlowly. Now this kind of continuity is properly the ſucceſſion of ſeveral ſounds, or the effect of ſeveral diſtinct ſtrokes, or repeated impulſes, upon the ſonorous body, ſo quick that we judge it to be one continued ſound, eſpecially if it is continued in one degree of ſtrength and loudneſs; but it alſo muſt be continued in one degree of tune, elſe it cannot be called one note in muſic. And this

leads me naturally to consider the very old and notable distinction of a twofold motion of sound, thus,

Sound may move through various degrees of acuteness in a continual flux, so as not to rest on any degree for any assignable, or at least sensible time; which the ancients called the continuous motion of sound, proper only to speaking and conversation. Or, 2do. it may pass from degree to degree, and make a sensible stand at every pitch, so as every degree shall be distinct; this they called the discrete or discontinued motion of sound, proper only to music or singing. But there may be no obscurity here, consider, that as the ideas of motion and distance are inseparably connected, so they belong in a proper sense to bodies and space; and whatever other thing they are applied to, it is in a figurative and metaphorical sense, as here to sounds; yet the application is very intelligible, as I shall explain it. Voice or sound is considered as one invidual being, all other differences being neglected except that of acuteness and gravity, which is not considered as constituting different sounds, but different states of the same sound; which is easy to conceive: and so the several degrees or pitches of tune, are considered as several places in which a voice may exist. And when we hear a sound successively existing in different degrees of tune, we conceive the voice to have moved from the one place to the other; and then it is easy to conceive a kind of distance between the two degrees of places; for as bodies are said to be distant, between which other bodies may be placed, so two sounds are said to be at distance, with respect of tune, between which other degrees may be conceived, that shall be acute with respect to the one, and grave with respect to the other. But when the voice continues in one pitch, though there may be many interruptions and sensible rests whereby the sound doth end and begin again, yet there is no motion in that case, the voice being all the time in one place. Now this motion, in a simple and proper sense, is nothing else but the successive existence of several sounds differing in tune. When the successive degrees are so near, that like the colours of a rainbow, they are as it were lost in one another, so that in any sensible distance there is an indefinite number of degrees, such kind of succession is of no use in music; but when it is such that the ear is judge of every single difference, and can compare several differences, and apply some known measure to them, there the object of music does exist; or when

when there is a ſucceſſion of ſeveral ſounds diſtinct by ſenſible reſts, though all in the ſame tune, ſuch a ſucceſſion belongs alſo to muſic.

From this twofold motion explained, we ſee a twofold continuity of ſound, both ſubject to certain and determinate meaſures of duration; the one is that ariſing from the continuous motion mentioned, which has nothing to do in muſic: the other is the continuity or uninterrupted exiſtence of ſound in one degree of tune. The differences of ſounds in this reſpect, or the various meaſures of long and ſhort, or (which is the ſame at leaſt a conſequence) ſwift and ſlow in the ſucceſſive degrees of ſound, while it moves in the ſecond manner make a principal and neceſſary ingredient in muſic; whoſe effect is not inferior to any other thing concerned in the practice; and is what deſerves to be very particularly conſidered, though indeed it is not brought under ſo regular and determinate rules as the differences of tune.

5. Sounds are either ſimple or compound; but there is a twofold ſimplicity and compoſition to be conſidered here; the firſt is the ſame with what we explained in the laſt article, and relates to the number of ſucceſſive vibrations of the parts of the ſonorous body, and of the air, which comes ſo faſt upon the ear that we judge them all to be one continued ſound, though it is really a compoſition of ſeveral ſounds of ſhorter duration. And our judging it to be one, is very well compared to the judgment we make of that apparant circle of fire, cauſed by putting the fired end of a ſtick into a very quick circular motion; for ſuppoſe the end of the ſtick in any point of that circle which it actually deſcribes, the idea we receive of it there continues till the impreſſion is renewed by the ſudden return; and this being true of every point, we muſt have the idea of a circle of fire; the only difference is, that the end of the ſtick has actually exiſted in every point of the circle, whereas the ſound has had interruptions, though inſenſible to us becauſe of their quick ſucceſſion; but the things we compare are, the ſucceſſion of the ſounds making a ſenſible continuity with reſpect to time, and the ſucceſſion of the end of the ſtick in every point of the circle after a whole revolution; for it is by this we judge it to be a circle, making a continuity with reſpect to ſpace. The author of the Elucidationes Phyſicæ upon D' Cartes muſic, illuſtrates it in this manner, ſays he, As ſtanding corns are bended by one blaſt of wind, and before they can recover themſelves

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the wind has repeated the blaſt, ſo that the corn is ſtanding in the ſame inclined poſition for a certain time, ſeems to be the effect of one ſingle action of the wind, which is truly owing to ſeveral diſtinct operations; in like manner the ſmall branches (capillamenta) of the auditory nerve, reſembling ſo many ſtalks of corn, being moved by one vibration of the air, and this repeated before the nerve can recover its ſituation, gives occaſion to the mind to judge the whole effect to be one ſound. The nature of this kind of compoſition being ſo far explained, we are next to conſider what ſimplicity in this ſenſe is; and I think it muſt be the effect of one ſingle vibration, or as many vibrations as are neceſſary to raiſe in us the idea of ſound; but perhaps it may be a queſtion, whether we ever have, or if we can raiſe ſuch an idea of ſound: there may be alſo another queſtion, whether any idea of ſound can exiſt in the mind for an indiviſible ſpace of time; the reaſon of this queſtion is, that if every ſound exiſts for a finite time, it can be divided into parts of a ſhorter duration, and then there is no ſuch thing as an abſolute ſimplicity of this kind, unleſs we take the notion of it from the action of the external cauſe of ſound, *viz.* the number of vibrations neceſſary to make ſound actually exiſt, without conſidering how long it exiſts; but as it is not probable that we can ever actually produce this, *i. e.* put a body in a ſounding motion, and ſtop it preciſely when there are as many vibrations finiſhed as are abſolutely neceſſary to make ſound, we muſt reckon the ſimplicity of ſound, conſidered in this manner, and with reſpect to practice, a relative thing; that being only ſimple to us which is the moſt ſimple, either with reſpect to the duration or the cauſe, that we ever hear: but whether we conſider it in the repeated action of the cauſe or the conſequent duration, which is the ſubject of the laſt article, there is ſtill another ſimplicity and compoſition of ſounds very different from that, and of great importance in muſic, which I ſhall next explain.

A ſimple ſound is the product of one voice or individual body, as the ſound of one flute or one man's voice. A compound ſound conſiſts of the ſounds of ſeveral diſtinct voices or bodies, all united in the ſame individual time and meaſure of duration, *i. e.* all ſtriking the ear together, whatever their other difference may be. But we muſt here diſtinguiſh a natural and artificial compoſition; to underſtand this, remember,

member, that the air being put into motion by any body, communicates that motion to other bodies; the natural compoſition of ſounds is therefore, that which proceeds from the manifold reflections of the firſt ſound, or that of the body which firſt communicates ſounding motion to the air, as the flute or violin in one's hand; theſe reflections, being many, according to the circumſtances of the place, or the number, nature, and ſituations of the circumjacent bodies, make ſounds more or leſs compound. This is a thing we know by common exeprience; we can have a hundred proofs of it every day by ſinging, or ſounding any muſical inſtrument in different places, either in the fields or within doors; but theſe reflections muſt be ſuch as returning very ſuddenly do not produce what we call an echo, and have only this effect, to increaſe the ſound, and make an agreeable reſonance; but ſtill in the ſame tune with the original note; or, if it be a compoſition of different degrees of tune, they are ſuch as mix and unite, ſo that the whole agrees with that note. But this compoſition is not under rules of art; for though we learn by experience how to diſpoſe theſe circumſtances that they may produce the deſired effect, yet we neither know the number or different tunes of the ſounds that enter into this compoſition; and therefore they come not under the muſician's direction in what is hereafter called the compoſition of muſic; his care being only about the artificial compoſition, or that mixture of ſeveral ſounds, which being made by art, are ſeparable and and diſtinguiſhable one from another. So the diſtinct ſounds of ſeveral voices or inſtruments, or ſeveral notes of the ſame inſtrument, are called ſimple ſounds, in diſtinction from the artificial compoſition, in which to anſwer the end of muſic, the ſimples muſt have ſuch an agreement in all relations, but principally and above all in acuteneſs and gravity, that the ear may receive the mixture with pleaſure.

6. There remains another diſtinction of ſound neceſſary to be conſidered, whereby they are ſaid to be ſmooth and even, or rough and harſh; alſo clear or blunt, hoarſe and obtuſe; the ideas of theſe differences muſt be ſought from obſervations; as to the cauſe of them, they depend upon the diſpoſition and ſtate of the ſonorous body, or the circumſtances of the place. Smooth and rough ſounds depend upon the body principally; we have a notable example of rough and harſh ſound in ſtrings that are unevenly and not of the ſame conſtitution and dimenſion throughout; and for

this

this reaſon that their ſounds are very grating, they are called falſe ſtrings. I will let you in few words hear how Monſieur Perrault accounts for this. He affirms that there is no ſuch thing as a ſimple ſound, and that the ſound of the ſame bell or chord is a compound of the ſounds of the ſeveral parts of it; ſo that where the parts are homogeneous, and the dimenſions or figure uniform, there is always ſuch a perfect union and mixture of all theſe ſounds that makes one uniform, ſmooth and evenly ſound; and the contrary produces harſhneſs; for the likeneſs of parts and figure makes an uniformity of vibrations, whereby a great number of ſimilar and coincident motions conſpire to fortify and improve each other mutually, and unite for the more effectual production of the ſame effect. He proves his hypotheſis by the phenomena of a bell, which differs in tone according to the part you ſtrike, and yet ſtrike it any where there is a motion over all the parts; he conſiders therefore the bell as compoſed of an infinite number of rings, which according to their different dimenſions have different tones, as chords of different lengths have (cæteris paribus) and when it is ſtruck, the vibrations of the parts immediately ſtruck ſpecify the tone, being ſupported by a ſufficient number of conſonant tones in other parts: and to confirm this he relates a very remarkable thing; he ſays, He happened in a place where a bell ſounded a fifth acuter than the tone it uſed to give in other places; which in all probability, ſays he, was owing to the accidental diſpoſition of the place, that was furniſhed with ſuch an adjuſtment for reflecting that particular tone with force, and ſo unfit for reflecting others, that it abſolutely prevailed and determined the concord and total ſound to the tone of that fifth. If we conſider the ſound of a violin, and all ſtringed inſtruments, we have a plain demonſtration that every note is the effect of ſeveral more ſimple ſounds; for there is not only the ſound reſulting from the motion of the ſtring, but alſo that of the motion of the parts of the inſtrument; that this has a very conſiderable effect in the total ſound is certain becauſe we are very ſenſible of the tremulous motion of the parts of the violin, and eſpecially, becauſe the ſame ſtring upon different violins ſounds very differently, which can be for no other reaſon but the different conſtitutions, of the parts of theſe inſtruments, which being moved by communication with the ſtring increaſe the ſound, and make it more or leſs agreeable, according to their different natures:

But Perrault affirms the ſame of every ſtring in itſelf without conſidering the inſtrument; he ſays, every part of the ſtring has its particular vibrations different from the groſs and ſenſible vibrations of the whole, and theſe are the cauſes of different motions (and ſounds) in the particles; which being mixed and unite, as was ſaid of the ſounds that compoſe the total ſound of a bell, make an uniform and evenly compoſition, wherein not only one tone prevails, but the mixture is ſmooth and agreeable; but when the parts are unevenly and irregularly conſtitute, the ſound is harſh and the ſtring from that called falſe. And therefore ſuch a ſtring, or other body having the like fault, has no certain and diſtinct tone, being a compoſition of ſeveral tones that do not unite and mix ſo as to have one predominant that ſpecifies the total tone.

Again for clear or hoarſe ſounds they depend upon circumſtances that are accidental to the ſonorous body; ſo a man's voice, or the ſound of an inſtrument, will be hollow and hoarſe, if it is raiſed within an empty hogſhhead, which is clear and bright out of it; the reaſon is very plainly the mixture of other and different ſounds raiſed by reflection, that corrupt and change the ſpecies of the primitive and direct ſound.

Now that ſounds may be fit for obtaining the end of muſic they ought to be ſmooth and clear; eſpecially the firſt, becauſe if they have not one certain and diſcernible tone, capable of being compared to others, and ſtanding to them in a certain relation of acuteneſs, whoſe differences the ear may be able to judge of and meaſure, they cannot poſſibly anſwer the end of muſic, and therefore are no part of the object of it.

But there are alſo ſounds which have a certain tone, yet being exceſſive, either in acuteneſs or gravity, bear not that juſt proportion to the capacity of the organs of hearing, as to afford agreeable ſenſations. Upon the whole then we ſhall call that harmonic or muſical ſound, which being clear and even is agreeable to the ear, and gives a certain and diſcernible tune (hence alſo called tunable ſound) which is the ſubject of the whole theory of harmony.

Thus we have conſidered the properties and affections of ſound that are any way neceſſary to the ſubject in hand; and of all the things mentioned, the relation of acuteneſs and gravity, or the tune of ſounds, is the principal ingre-

dient in muſic; the diſtinctneſs and determinateneſs of which relation gives ſound the denomination of harmonical or muſical: next to which are the various meaſures of duration. There is nothing in ſounds without theſe that can make muſic; a juſt theory whereof abſtracts from all other things, to conſider the relations of ſounds in the meaſures of tune and duration; though indeed in the practice other differences are conſidered (of which ſomething more may be ſaid afterwards) but they are ſo little, compared to the other two, and under ſo very general and uncertain theory, that I do not find they have ever been brought into the definition of muſic.

A Definition and Division of Music.

WE may from what is already ſaid affirm, that muſic has for its object, in general, ſound; and particularly, ſounds conſidered in their relations of tune and duration, as under that formality they are capable of affording agreeable ſenſations. I ſhall therefore define muſic, a ſcience that teaches how ſounds under certain meaſures of tune and time, may be produced; and ſo ordered or diſpoſed, as in conſonance (*i. e.* joint ſounding) or ſucceſſion, or both, they may raiſe agreeable ſenſations.

Pleaſure I have ſaid is the immediate end of muſic; I ſuppoſe it therefore as a principle, that the objects propoſed, are capable, being duly applied, to affect the mind agreeably: nor is it a precarious principle; experience proves, and we know by the infallible teſtimony of our ſenſes, that ſome ſimple ſounds ſucceed others upon the ear with a poſitive pleaſure, others diſagreeably; according to the certain relations of tune and time; and ſome compound ſounds are agreeable, others offenſive to the ear; and that there are degrees and variety in this pleaſure, according to the various meaſures of theſe relations. For what pretences are made to the application of muſic to ſome other purpoſes than mere pleaſure or recreation, as theſe are obtained chiefly by means of that pleaſure, they cannot be called the immediate end of it.

From the definition given, we have the ſcience divided into theſe two general parts. Firſt, The knowledge of the Materia Muſica, or, how to produce ſounds, in ſuch relations of tune and time as ſhall be agreeable in conſonance

or

or ſucceſſion, or both. I do not mean the actual producing of the ſounds by an inſtrument or voice, which is merely the mechanical or effective part; but the knowledge of the various relations of tune and time, which are the eſſential principles out of which the pleaſure ſought ariſes, and upon which it depends. This is the pure ſpeculative part of muſic. Second, How theſe principles are to be applied; or, how ſounds, in the relations that belong to muſic (as theſe are determined in the firſt part) may be ordered, and variouſly put together in ſucceſſion and conſonance ſo as to anſwer the end; which part we rightly call, The art of compoſition; and it is properly the practical part of muſic.

Some have added a third part, *viz.* The knowledge of inſtruments; but as this depends altogether upon the firſt, and is only an application or expreſſion of it, it could never be brought regularly into the definition; and ſo can be no part of the diviſion of the ſcience; yet may it deſerve to be treated of, as a conſequent or dependent of it, and neceſſary to be underſtood for the effectual part. As this has no ſhare in my deſign, I ſhall detain you but while I ſay, in a few words, what I think ſuch a treatiſe ſhould contain. And 1mo, There ſhould be a theory of inſtruments, giving an account of their frame and conſtruction, particularly, how, ſuppoſing them completely provided of all their apparatus, each contains in it the principles of muſic, *i. e.* how the ſeveral degrees of tune pertaining to muſic are to be found upon the inſtruments. The ſecond part ſhould contain the practice of inſtruments, in ſuch directions as might be helpful for the dextrous and nice handling of them, or the elegant performance of muſic: and here might be annexed rules for the right uſe of the voice. But after all, I believe theſe things will be more ſucceſsfully done by a living inſtructor, I mean a ſkilful and experienced maſter, with the uſe of his voice or inſtrument: though I doubt not ſuch might help us too by rules; but I have done with this.

You muſt next obſerve with me, that as the art of common writing is altogether diſtinct from the ſciences to which it is ſubſervient by preſerving what would otherwiſe be loſt, and communicating thoughts at diſtance; ſo there is an art of writing proper to muſic, which teaches how, by a fit and convenient way of repreſenting all the degrees and meaſures of ſound, ſufficient for directing in the executive part, one

who underſtands how to uſe his voice or inſtrument, the artiſt when he has invented a compoſition anſwering the principles and end of muſic, may preſerve it for his own uſe, or communicate it to another preſent or abſent. To this I have very juſtly given a place in the following work, as it is a thing of a general concern to muſic, though no part of the ſcience, and merely a handmaid to the practice; and particularly as the knowledge of it is neceſſary for carrying on my deſign. I now return to the diviſion above made, which I ſhall follow in explaining this ſcience.

The firſt general branch of this ſubject, which is the contemplative part, divides naturally into theſe. Firſt, The knowledge of the relations and meaſures of tune. And, ſecondly, of time. The firſt is properly what the ancients properly called *Harmonica*, or the doctrine of harmony in ſounds; becauſe it contains an explication of the grounds, with the various meaſures and degrees of the agreement (harmony) of ſounds in reſpect of their tune. The other they called *Rythmica*, becauſe it treats of the numbers of ſounds or notes with reſpect to time, containing an explication of the meaſures of long and ſhort, or ſwift and ſlow in the ſucceſſion of ſounds.

The ſecond general branch, which is the practical part, as naturally divides into two parts anſwering to the parts of the firſt: that which anſwers to the Harmonica, the ancients called *Melopœia*; becauſe it contains the rules of making ſongs with reſpect to tune and harmony of ſounds; though indeed we have no ground to believe that the ancients had any thing like compoſition in parts. That which anſwers to the Rythmica, they called *Rythmopœia*, containing the rules concerning the application of the numbers and time.

A GENERAL ACCOUNT OF THE METHOD OF WRITING MUSIC.

WHAT this title imports is neceſſary to be well underſtood, and to come to the thing itſelf let us conſider.

It was not enough to have diſcovered ſo much of the nature of ſound, as to make it ſerviceable to our pleaſure, by the various combinations of the degrees of tune, and meaſures

meaſures of time; it was neceſſary alſo, for enlarging the application, to find a method how to repreſent theſe fleeting and tranſient objects, by ſenſible and permanent ſigns; whereby they are as it were arreſted: and what would otherwiſe be loſt even to the compoſer, he preſerves for his own uſe, and can communicate it to others at any diſtance; I mean he can direct them how to raiſe the like ideas to themſelves, ſuppoſing they know how to take ſounds in any relation of tune and time directed; for the buſineſs of this art properly is, to repreſent the various degrees and meaſures of tune and time in ſuch a manner, that the connection and ſucceſſion of the notes may be eaſily and readily diſcovered, and the ſkilful practiſer may at ſight find his notes, or, as they ſpeak, read any ſong.

As the two principal parts of muſic are the tune and time of ſounds, ſo the art of writing it is very naturally reduced to two parts correſponding to theſe. The firſt, or the method of repreſenting the degrees of tune, I ſhall explain in this chapter; which will lead me to ſay ſomething in general of the other, a more full and particular account whereof you ſhall have in the next chapter.

We have already ſeen how the degrees of tune or the ſcale of muſic may be expreſſed by ſeven letters repeated as oft as we pleaſe in a different character; but theſe, without ſome other ſigns, do not expreſs the meaſures of time, unleſs we ſuppoſe all the notes of a ſong to be of equal length. Now, ſuppoſing the thing to be made not much more difficult by theſe additional ſigns of time, yet the whole is more happily accompliſhed in the following manner.

If we draw any number of parallel lines, as in plate 1. fig. 7. then, from every line to the next ſpace, and from every ſpace to the next line up and down, repreſents a degree of the diatonick ſcale; and conſequently from every line or ſpace to every other at greater diſtance repreſents ſome other degree of the ſcale, according as the immediate degrees from line to ſpace, and from ſpace to line are determined. Now to determine theſe we make uſe of the ſcale expreſt by ſeven letters, as already explained, *viz.* *c*: *d*; *e*. *f*: *g*; *a*: *b*. *c*— where the tone greater is repreſented by a colon (:) the tone leſſer by a ſemicolon (;) and the ſemitone greater by a (.). If the lines and ſpaces are marked and named by theſe letters, as you ſee in the figure, then according to the relations aſſigned to theſe letters (*i. e.* to the ſounds expreſt

preſt by them) the degrees and intervals of ſound expreſt by the diſtances of lines and ſpaces are determined.

As to the extent of the ſcale of muſic, it is infinite if we conſider what is ſimply poſſible, but for practice, it is limited; and in the preſent practice 4 octaves, or at moſt 4 octaves with a 6th, comprehending 34 diatonick notes, is the greateſt extent. There is ſcarcely any one voice to be found that reaches near ſo far, though ſeveral different voices may; nor any one ſingle piece of melody, that comprehends ſo great an interval betwixt its higheſt and loweſt note: yet we muſt conſider not only what melody requires, but what the extent of ſeveral voices and inſtruments is capable of, and what the harmony of ſeveral of them requires; and in this reſpect the whole ſcale is neceſſary, which you have repreſented in the figure directed to; I ſhall therefore call it the univerſal ſyſtem, becauſe it comprehends the whole extent of modern practice.

But the queſtion ſtill remains, how any particular order and ſucceſſion of ſounds is repreſented? And this is done by ſetting certain ſigns and characters one after another, up and down on the lines and ſpaces, according to the intervals and relations of tune to be expreſt; that is, any one letter of the ſcale, or the line or ſpace to which it belongs, being choſen to ſet the firſt note on, all the reſt are ſet up and down according to the mind of the compoſer, upon ſuch lines and ſpaces as are at the deſigned diſtances, *i. e.* which expreſs the deſigned interval according to the number and kind of the intermediate degrees; and mind that the firſt note is taken at any convenient pitch of tune; for the ſcale, or the lines and ſpaces, ſerve only to determine the tune of the reſt with relation to the firſt, leaving us to take that as we pleaſe: for example, if the firſt note is placed on the line *c*, and the next deſigned a tone or 2d *g*. above, it is ſet on the next ſpace above, which is *d*; or if it is deſigned a 3d *g*. it is ſet on the line above which is *e*; or on the ſecond line above, if it was deſigned 5th, as you ſee repreſented in the 2d column of the ſcale in the preceding figure, where I have uſed this character O for a note. And here let me obſerve in general, that theſe characters ſerve not only to direct how to take the notes in their true tune, by the diſtance of the lines and ſpaces on which they are ſet; but by a fit number and variety of them (to be explained in the next chapter) they expreſs the

the time and meaſure of duration of the notes; whereby it is plain that theſe two things are no way confounded; the relative meaſures of tune being properly determined by the diſtances of lines and ſpaces, and the time by the figure of the note or character.

It is eaſy to obſerve what an advantage there is in this method of lines and ſpaces, even for ſuch muſic as has all its notes of equal length, and therefore needs no other thing but the letters of the ſcale to expreſs it; the memory and imagination are here greatly aſſiſted, for the notes ſtanding upward and downward from each other on the lines and ſpaces, expreſs the riſing and falling of the voice more readily than different characters of letters; and the intervals are alſo more readily perceived.

Obſerve in the next place, that with reſpect to inſtruments of muſic, I ſuppoſe their notes are all named by the letters of the ſcale, having the ſame diſtances as already ſtated in the relations of ſounds expreſt by theſe letters; ſo that knowing how to raiſe a ſeries of ſounds from the loweſt note of any inſtrument by diatonick degrees (which is always firſt learned) and naming them by the letters of the ſcale, it is eaſily conceived how we are directed to play on any inſtrument, by notes ſet upon lines and ſpaces that are named by the ſame letters. It is the buſineſs of the maſters and profeſſors of ſeveral inſtruments to teach the application more expreſly. And as to the human voice, obſerve, the notes thereof, being confined to no order, are called *c* or *d*, &c. only with reſpect to the direction it receives from this method; and that direction is alſo very plain; for having taken the firſt note at any convenient pitch, we are taught by the places of the reſt upon the lines and ſpaces how to tune them in relation to the firſt, and to one another.

Again, as the artificial notes which divide the tones of the natural ſeries, are expreſt by the ſame letters, with theſe marks, ♯, ♭, already explained, ſo they are alſo placed on the ſame lines and ſpaces, on which the natural note named by that letter ſtands; thus *c*♯ and *c* belong to the ſame line or ſpace, as alſo *d*♯ and *d*. And when the note on any line or ſpace ought to be the artificial one, it is marked ♯ or ♭; and where there is no ſuch mark it is always the natural note. Thus if from *a* (natural) we would ſet a 3d *g*, upward, it is *c*♯; or a 3d *l*. above *g*,

it is *b* flat or ♭. Theſe artificial notes are all determined on inſtruments to certain places or poſitions, with reſpect to the parts of the inſtrument and the hand; and for the voice they are taken according to the diſtance from the laſt note, reckoned by the number of tones and ſemitones that every greater interval contains.

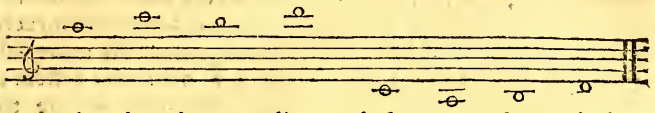
The laſt general obſerve I make here is, that as there are twelve different notes in the ſemitonic ſcale, the writing might be ſo ordered, that from every line a ſpace to the next ſpace or line ſhould expreſs a ſemitone; but it is much better contrived, that theſe ſhould expreſs the degrees of the diatonick ſcale (*i. e.* ſome tones ſome ſemitones) for hereby we can much eaſier diſcover what is the true interval between any two notes, becauſe they are fewer lines and ſpaces interpoſed, and the number of them ſuch as anſwers to the denomination of the intervals; ſo an octave comprehends four lines and four ſpaces; a 5th comprehends three lines and two ſpaces, or three ſpaces and two lines; and ſo of others. I have already ſhewn, how it is better that there ſhould be but ſeven different letters, to name the twelve degrees of the ſemitonic ſcale; but ſuppoſing there were twelve letters, it is plain we ſhould need no more lines to comprehend an octave, becauſe we might aſſign two letters to one line or ſpace, as well as to make it, for example, both *c*♯ and *c*, whereof the one belongeth to the diatonick ſeries, ſhould mark it for ordinary, and upon occaſions the other be brought in the ſame way we now do the ſigns ♯ and ♭.

A MORE PARTICULAR ACCOUNT OF THE METHOD; WHERE, OF THE NATURE AND USE OF CLEFS.

THOUGH the ſcale extends to thirty-four diatonick notes, which require ſeventeen lines with their ſpaces, yet becauſe no one ſingle piece of melody comprehends near ſo many notes, whatever ſeveral pieces joined in one harmony comprehend among them; and becauſe every piece or ſingle ſong is directed or written diſtinctly by itſelf; therefore we never draw more than five lines, which comprehend the greateſt number of the notes of any ſingle piece; and for thoſe caſes which require more we draw ſhort lines occaſionally

occaſionally, above or below the 5, to ſerve the notes that go higher or lower.

EXAMPLE.



Again, though every line and ſpace may be marked at the beginning with its letter, as has been done in former times; yet, ſince the art has been improving, only one line is marked, by which all the reſt are eaſily known, if we reckon up or down in the order of the letters; the letter marked is called the clef or key, becauſe by it we know the names of all the other lines and ſpaces, and conſequently the true quantity of every degree and interval. But becauſe every note in the octave is called a key, though in another ſenſe this letter marked is called in a particular manner the ſigned clef, becauſe being written on any line, it not only ſigns or marks that one, but explains all the reſt. And to prevent ambiguity in what follows, by the word Clef I ſhall always mean that letter which, being marked on any line, explains all the reſt, and by the word Key the principal note of any ſong in which the melody cloſes, in the ſenſe explained in the laſt chapter. Of theſe ſigned clefs there are three, viz. *c*, *f*, *g*; and that we may know the improvement in having but one ſigned clef in one particular piece, alſo how and for what purpoſe three different clefs are uſed in different pieces, conſider the following definition.

A Song is either ſimple or compound. It is a ſimple ſong, where only one voice performs; or, though there be more, if they are all uniſon or octave, or any other concord in every note, it is ſtill but the ſame piece of melody, performed by different voices in the ſame or different pitches of tune, for the intervals of the notes are the ſame in them all. A compound ſong is where two or more voices go together, with a variety of concords and harmony; ſo that the melody each of them makes is a diſtinct and different ſimple ſong, and all together make the compound. The melody that each of them produces is therefore called a part of the compoſition; and all ſuch compoſitions are very properly called ſymphonetic muſic, or muſic in parts; taking the word muſic here for the compoſition or ſong itſelf.

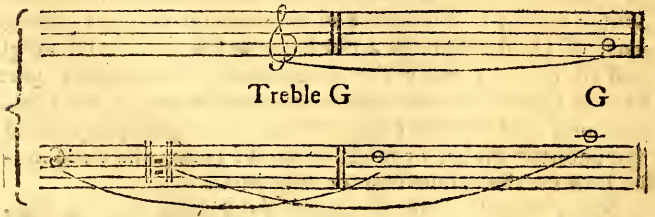
Now, becauſe in this compoſition the parts muſt be ſome of them higher and ſome lower (which are generally ſo or-

dered that the ſame part is always higheſt or loweſt, though in modern compoſitions they do frequently change) and all written diſtinctly by themſelves, as is very neceſſary for the performance; therefore the ſtaff of five lines upon which each part is written, is to be conſidered as a part of the univerſal ſyſtem or ſcale, and is therefore called a particular ſyſtem; and becauſe there are but five lines ordinarily, we are to ſuppoſe as many above and below as may be required for any ſingle part; which are actually drawn in the particular places where they are neceſſary.

The higheſt part is called the treble, or alt, whoſe clef is *g*, ſet on the 2d line of the particular ſyſtem, counting upward: the loweſt is called the baſs, i. e. baſis, becauſe it is the foundation of the harmony, and formerly in their plain compoſitions the baſs was firſt made, though it is otherwiſe now; the baſs clef is *f* on the 4th line upward: all the other parts, whoſe particular names you will learn from practice, I ſhall call mean parts, whoſe clef is *c*, ſometimes on one, ſometimes on another line; and ſome that are really mean parts are ſet with the *g* clef; and obſerve that the *c* and *f* clefs are marked with ſigns no-way reſembling theſe letters; I think it were as well if we uſed the letters themſelves, but cuſtom has carried it otherwiſe; yet that it may not ſeem altogether a whim, Kepler, chap. book 3. of his Harmony, has taken critical pains to prove, that theſe ſigns are only corruptions of the letters they repreſent; the curious may conſult him.

We are next to conſider the relations of theſe clefs to one another, that we may know where each part lies in the ſcale or general ſyſtem, and the natural relation of the parts among themſelves, which is the true deſign and office of the clefs. Now they are taken 5ths to one another, that is, the clef *f* is loweſt, *c* is a 5th above it, and *g* a 5th above *c*.

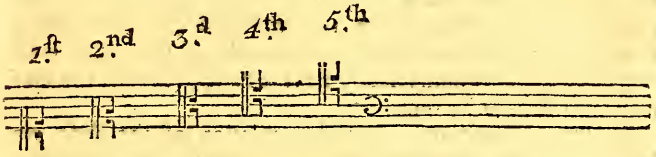
EXAMPLE. or thus



Obſerve,

Obſerve, that though in the particular ſyſtems, the treble or *g* clef is ordinarily ſet on the 2d line, the baſs or *f* clef on the 4th line, and the mean or *c* clef on the 3d line (eſpecially when there are but three parts) yet they are to be found on other lines; as particularly the mean clef, which moſt frequently changes place (becauſe there are many mean parts) is ſometimes on the 1ſt, 2d, 3d, 4th, and 5th lines; but on their removal have different names.

EXAMPLE.



1ſt Soprano: 2d Mozzo Soprano: 3d Contra Tenor: 4th Tenor: 5th Tenor Baſs. — The perſon who ſings from this laſt named cliff may prove his notes either from the mean on the 5th line, or baſs on the 3d; but on whatever line in the ſeparate particular ſyſtem any clef is ſigned, it muſt be underſtood to belong to the ſame place of the general ſyſtem, and to be the ſame individual note or ſound on the inſtrument which is directed by that clef; ſo that to know what part of the ſcale any particular ſyſtem is, we muſt take its clef where it ſtands ſigned in the ſcale, and take as many lines above and below it, as there are in the particular ſyſtem; or thus, we muſt apply the particular ſyſtem to the ſcale, ſo as the clef lines coincide, and then we ſhall ſee with what lines of the ſcale the other lines of the particular ſyſtem coincide: For example, if we find the clef on the 3d line upward in a particular ſyſtem; to find the coincident five lines to which it refers in the ſcale, we take with the *f* clef line, two lines above and two below. Again, if we have the *c* clef on the 4th line, we are to take in the ſcale with the clef line, one line above and three below, and ſo of others; ſo that according to the different places of the clef in a particular ſyſtem, the lines in the ſcale correſponden' to that ſyſtem may be all different, except the clef line which is invariable: and that you may with eaſe find in the

ſcale the five lines coincident with every particular ſyſtem, upon whatever line of the five the clef may be ſet.

As to the reaſon of changing the relative place of the clef, i. e. its place in the particular ſyſtem, it is only to make this comprehend as many notes of the ſong as poſſible, and by that means to have fewer lines above or below it; ſo if there are many notes above the clef note and few below it, this purpoſe is anſwered by placing the clef in the firſt or ſecond line; but if the ſong goes more below the clef, then it is beſt placed higher in the ſyſtem: in ſhort, according to the relation of the other notes to the clef note, the particular ſyſtem is taken differently in the ſcale, the clef line making one in all the variety, which conſiſts only in this, viz. taking any five lines immediately next other, whereof the clef line muſt always be one.

By this conſtant and invariable relation of the clefs, we learn eaſily how to compare the particular ſyſtems of ſeveral parts, and know how they communicate in the ſcale, i. e. which lines are uniſon, and which are different, and how far, and conſequently what notes of the ſeveral parts are uniſon, and what not: For you are not to ſuppoſe that each part has a certain bounds within which another muſt never come; no, ſome notes of the treble, for example, may be lower than ſome of the mean parts, or even of the baſs; and that not only when we compare ſuch notes as are not heard together, but even ſuch as are. And if we would put together in one ſyſtem, all the parts of any compoſition that are written ſeparately. The rule is plainly this, viz. place the notes of each part at the ſame diſtances above and below the proper clef, as they ſtand in the ſeparate ſyſtem. And becauſe all the notes that are conſonant (or heard together) ought to ſtand, in this deſign, perpendicularly over each other, therefore that the notes belonging to each part may be diſtinctly known, they may be made with ſuch differences as ſhall not confuſe or alter their ſignifications with reſpect to time, and only ſignify that they belong to ſuch a part; by this means we ſhall ſee how all the parts change and paſs thro' one another, i. e. which of them, in every note, is higheſt or loweſt or uniſon; for they do ſometimes change, tho' more generally the treble is higheſt and the Baſs loweſt, the change happening more ordinarily betwixt the mean parts among themſelves, or theſe with the treble

treble or baſs: The treble and baſs clefs are diſtant an octave and tone, and their parts do ſeldom interfere, the treble moving more above the clef note, and the baſs below.

We ſee plainly then, that the uſe of particular ſigned clefs is an improvement with reſpect to the parts of any compoſition; for unleſs ſome one key in the particular ſyſtems were diſtinguiſhed from the reſt, and referred invariably and conſtantly to one place in the ſcale, the relations of the parts could not be diſtinctly marked; and that more than one is neceſſary, is plain from the diſtance there muſt be among the parts: Or if one letter is choſen for all, there muſt be ſome other ſign to ſhew what part it belongs to, and the relation of the parts. Experience having approved the number and relations of the ſigned clefs which are explained, I ſhall add no more as to that, but there are other things to be here obſerved.

The chooſing theſe letters *f* . *c* . *g* for ſigned clefs, is a thing altogether arbitrary; for any other letter within the ſyſtem, will explain the reſt as well; yet 'tis fit there be a conſtant rule, that the ſeveral parts may be right diſtinguiſhed; and concerning this obſerve again, that for the performance of any ſingle piece the clef ſerves only for explaining the invervals among the lines and ſpaces, ſo that we need not mind what part of any greater ſyſtem it is, and we may take the firſt note as high or low as we pleaſe: For as the proper uſe of the ſcale is not to limit the abſolute degree of tone, ſo the proper uſe of the ſigned clef is not to limit the pitch, at which the firſt note of any part is to be taken, but to determine the tune of the reſt with relation to the firſt, and, conſidering all the parts together, to determine the relations of their ſeveral notes, by the relations of their clefs in the ſcale: And ſo the pitch of tune being determined in a certain note of one part, the other notes of that part are determined, by the conſtant relations of the letters of the ſcale; and alſo the notes of the other parts, by the relations of their clefs. To ſpeak particularly of the way of tuning the inſtruments that are employed in executing the ſeveral parts, is out of my way; I ſhall only ſay this, that they are to be ſo tuned as the clef notes, wherever they lie on the inſtruments which ſerve each part, be in the forementioned relations to one another.

As

As the harpſichord or organ (or any other of the kind) is the moſt extenſive inſtrument, we may be helped by it to form a clearer idea of theſe things: For conſider, a harpſichord contains in itſelf all the parts of muſic, I mean the whole ſcale or ſyſtem of the modern practice; the foremoſt range of keys contains the diatonic ſeries beginning, in the largeſt kind, in *g*, and extending to *c* above the fourth 8ve; which therefore we may well ſuppoſe repreſented by the preceeding ſcale. In practice, upon that inſtrument, the clef notes are taken in the places repreſented in the ſcheme; and other inſtruments are ſo tuned, that, conſidering the parts they perform, all their notes of the ſame name are uniſon to thoſe of the harpſichord that belong to the ſame part. I have ſaid, the harpſichord contains all the parts of muſic; and indeed any two diſtinct parts may be performed upon it at the ſame time and no more; yet upon two or more harpſichords tuned uniſons, whereby they are in effect but one, any number of parts may be executed: And in this caſe we ſhould ſee the ſeveral parts taken in their proper places of the inſtrument, according to the relations of their clefs explained: And as to the tuning the inſtrument, I ſhall only add, that there is a certain pitch to which it is brought, that it may be neither too high nor too low, for the accompaniment of other inſtruments, and eſpecially for the human voice, whether in uniſon or taking a different part; and this is called the Conſort Pitch. To have done, you muſt conſider, that for performing any one ſingle part, we may take the clef note in any 8ve, i. e. at any note of the ſame name, providing we go not too high or too low for finding the reſt of the notes of the ſong: But in a conſort of ſeveral parts, all the clefs muſt be taken, not only in the relations, but alſo in the places of the ſyſtem already mentioned, that every part may be comprehended in it: Yet ſtill you are to mind, that the tune of the whole, or the abſolute pitch, is in itſelf an arbitrary thing, quite foreign to the uſe of the ſcale; tho' there is a certain pitch generally agreed upon, that differs not very much in the practice of any one nation or ſet of muſicians from another. And therefore,

When I ſpeak of the place of the clefs in the ſcale or general ſyſtem, you muſt underſtand it with reſpect to a ſcale of a certain determined extent; for this being undetermined,

ed, ſo muſt the places of the clefs be: And for any ſcale of a certain extent, the rule is, that the mean clef c be taken as near the middle of the ſcale as poſſible, and then the clef *g* a 5th above, and *f* a 5th below, as it is in the preſent general ſyſtem of four 8ves and a 6th, repreſented in the ſcheme, and actually determined upon harpſichords.

In the laſt place conſider, that ſince the lines and ſpaces of the ſcale, with the degrees ſtated among them by the letters, ſufficiently determine how far any note is diſtant from another, therefore there is no need of different characters of letters, as would be if the ſcale were only expreſt by theſe letters: And when we ſpeak of any note of the ſcale, naming it by *a* or *b*, &c. we may explain what part of the ſcale it is in, either by numbring the 8ves from the loweſt note, and calling the note ſpoken of (for example) *c* in the loweſt 8ve or in the 2d 8ve, and ſo on: Or, we may determine its place by a reference to the ſeat of any of the three ſigned clefs; and ſo we may ſay of any note, as *f* or *g*, that it is ſuch a clef note, or the firſt or ſecond, &c. *f* or *g* above ſuch a clef. Take this application, ſuppoſe you aſk me what is the higheſt note of my voice? If I ſay *d*, you are not the wiſer by this anſwer, till I determine it by ſaying it is *d* in the fourth octave, or the firſt *d* above the treble clef. But again, neither this queſtion nor the anſwer is ſufficiently determined, unleſs it have a reference to ſome ſuppoſed pitch of tune in a certain fixt inſtrument, as the ordinary Conſort Pitch of a harpſichord, becauſe, as I have frequently ſaid, the ſcale of muſic is concerned only with the relation of notes and the order of degrees, which are ſtill the ſame in all differences of tune, in the whole ſeries.

Of the REASON, USE, and variety of the SIGNATURES of CLEFS.

I Have already ſaid, that the natural and artificial Note expreſſed by the ſame letter, as *c* and *c*♯, are both ſet on the ſame line or ſpace. When there is no ♯ or ♭ marked on any line or ſpace, at the beginning with the clef, then all the notes are natural; and if in any particular place of the ſong, the artificial note is required, 'tis ſignified by the ſign ♯ or ♭, ſet upon the line a ſpace before that note; but if a

♯ or ♭ is ſet at the beginning in any line or ſpace with the clef, then all the notes on that line or ſpace are the artificial ones, that is, are to be taken a ſemitone higher or lower than they would be without ſuch a ſign; the ſame affects all their 8ves above or below, tho' they are not marked ſo. And in the courſe of the ſong, if the natural note is ſometimes required, it is ſignified by this mark ♮. And the marking the ſyſtem at the beginning with ſharps or flats, I call the ſignature of the clef.

In what's ſaid, you have the plain rule for application; but that we may better conceive the reaſon and uſe of theſe ſignatures, it will be neceſſary to recollect, and alſo make a little clearer, what has been explained of the nature of keys or modes, and of the original and uſe of the ſharp and flat notes, I ſhall explain what a key and mode in muſic is; and diſtinguiſh betwixt theſe two, and ſhew that there are and can be but two different modes, the greater and the leſſer, according to the two concinnous diviſions of the 8ve, viz. by the 3d *g*. or the 3d *l*. and their proper accompaniments; and whatever difference you may make in the abſolute pitch of the whole notes, or of the firſt note which limit all the reſt, the ſame individual ſong muſt ſtill be in the ſame mode; and by the key I underſtand only that pitch or degree of tune at which the fundamental or cloſe note of the melody, and conſequently the whole 8ve is taken; and becauſe the fundamental is the principal note of the 8ve which regulates the reſt, it is peculiarly called the key. Now as to the variety of keys, if we take the thing in ſo large a ſenſe as to ſignify the abſolute pitch of tune at which any fundamental note may be taken, the number is at leaſt indefinite; but in practice it is limited, and particularly with reſpect to the denominations of keys, which are only twelve, viz. the twelve different names or letters of the ſemitonic ſcale; ſo we ſay the key of a ſong is *c* or *d*, &c. which ſignifies that the cadence or cloſe of the melody is upon the note of that name when we ſpeak of any inſtrument; and with reſpect to the human voice, that the cloſe note is uniſon to ſuch a note on an inſtrument; and generally, with reſpect both to inſtruments and voice, the denomination of the key is taken from the place of the cloſe note upon the written muſic, i. e. the name of the line or ſpace where it ſtands: Hence we ſee, that tho' the difference of keys refers to the degree of tune, at which the fundamental, and conſequently the whole

8ve

8ve is taken, in diſtinction from the mode or conſtitution of an octave, yet theſe denominations determine the differences only relatively, with reſpect to one certain ſeries of fixed ſounds, as a ſcale of notes upon a particular inſtrument, in which all the notes of different names are different keys, according to the general definition, becauſe of their different degrees of tune; but as the tuning of the whole may be in a different pitch, and the notes taken in the ſame part of the inſtrument, are, without reſpect to the tuning of the whole, ſtill called by the ſame name *c* or *d*, &c. becauſe they ſerve only to mark the relation of tune betwixt the notes, therefore 'tis plain, that in practice a ſong will be ſaid to be in the ſame key as to the denomination, though the abſolute tune be different, and to be in different keys when the abſolute tune is the ſame; as if the note *a* is made the key in one tuning, and in another the note *d* uniſon to *a* of the former. Now, this is a kind of limitation of the general definition, yet it ſerves the deſign beſt for practice, and indeed cannot be otherwiſe without infinite confuſion. I ſhall a little below make ſome more particular remarks upon the denominations of ſounds, or notes raiſed from inſtruments or the human voice: but from what has been explained, you will eaſily underſtand what difference I put betwixt a mode and a key; of modes there are only two, and they reſpect what I would call the internal conſtitution of the 8ve; but keys are indefinite in the more general and abſtract ſenſe; and with regard to their denominations in practice they are reduced to twelve, and have reſpect to a circumſtance that is external and accidental to the mode; and therefore a key may be changed under the ſame mode, as when the ſame ſong, which is always in the ſame mode, is taken up at different notes or degrees of tune; and from the ſame fundamental or key a ſeries may proceed in a different mode, as when different ſongs begin in the ſame note. But then becauſe common uſe applies the word key in both ſenſes, i. e. both to what I call a key and a mode, to prevent ambiguity, the word ſharp or flat ought to be added when we would expreſs the mode; ſo that a ſharp key is the ſame as the greater mode, and a flat key a leſſer mode; and when we would expreſs both mode and key, we join the name of the key note, thus, we may ſay ſuch a ſong is for example in the ſharp or flat key *c*, to ſignify that the fundamental note in which the cloſe is made is the note called *c* on the inſtrument, or uniſon to it in the voice; or gene-

rally, that it is ſet on the line or ſpace of that name in writing; and that the 3d *g*, or 3d *l*, is uſed in the melody, while the ſong keeps within that key; for I have alſo obſerved, that the ſame ſong may be carried through different keys, or make ſucceſſive cadences in different notes, which is commonly ordered by bringing in ſome note that is none of the natural notes of the former key, of which more immediately: But when we hear of any key denominated *c* or *d* without the word ſharp or flat, then we can underſtand nothing but what I have called the key in diſtinction from the mode, i. e. that the cadence is made in ſuch a note, ÷|÷.

Again, I ſhall explain the uſe of the notes we call ſharp and flat, or artificial notes, and the diſtinction of keys in that reſpect into natural and artificial, and ſhew that they are neceſſary for correcting the defects of inſtruments having fixt ſounds, that beginning at any note we may have a true concinnous diatonick ſeries from that note, which in a ſcale of fixt degrees in the 8ve we cannot have, all the orders of degrees proceeding from each of the ſeven natural notes being different, of which only two are concinnous, viz. from *c* which makes a ſharp key, and from *a* which makes a flat key; and to apply this more particularly, you muſt underſtand the uſe of theſe ſharp or flat notes to be this, that a ſong, which, being ſet in a natural key, or without ſharps and flats, is either too high or too low, may be tranſpoſed or ſet in another more convenient key, which neceſſarily brings in ſome of the artificial notes, in order to make a diatonick ſeries from this new key, like that from the other; and when the ſong changes the key before it comes to the final cloſe, though the principal be natural, yet ſome or theſe into which it changes may require artificial notes, which are eſſential and natural notes of this new key; for though this be called an artificial key, it is only ſo with reſpect to the names of the notes in the fixt ſyſtem, which are ſtill natural with reſpect to their proper fundamental, viz. the key into which the piece is tranſpoſed, or into which it changes where the principal key is natural.

And even with reſpect to the human voice, which is under no limitation, I have ſhewn the neceſſity of theſe names, for the ſake of a regular, diſtinct and eaſy repreſentation of ſounds, for directing the voice in performance. I ſhall next more particularly explain by ſome examples, the buſineſs of keeping in and going out of keys. Example. Suppoſe a ſong begins in *c* or at leaſt makes the firſt cloſe in it; if all the notes

notes preceding that close are in true musical relation to *c* as a fundamental in one species, suppose as a sharp key, i. e. with a 3d *g*, the melody has been still in that key. But if proceeding, the composer brings in the note *f*♯, he leads the melody out of the former key, because *f*♯ is none of the natural notes of the 8ve *c*, being a false 4th to *c*. Again he may lead it out of the key without any false note, by bringing in one that belongs not to the species in which the melody was begun. Suppose after beginning in the sharp key *c*, he introduces the note *g*♯, which is a flat 6th, or an extreme sharp 5th to *c*, and therefore harmonious, yet it belongs to it as a flat key, and consequently is out of the key as a sharp one. And because the same song cannot with any good effect be made to close twice in the same note in a different species, therefore after introducing the note *g*♯, the next close must be in some other note as *a*, and then the key in both senses will be changed, because *a* has naturally a 3d ♭; and therefore when any note is said to be out of a key, it is understood to be out of it either as making a false interval, or as belonging to it in another species than a supposed one, i. e. if it belong to it as a sharp key, it is out of it as a flat one; the first close is in *a* as a sharp key, all the preceding notes being natural to it as such; then proceeding in the same key, you see *g* (natural) introduced, which belongs not to *a* as a sharp key, and also *a*♯, which is quite out of the former key. By these notes a close is brought on in ♭, and the melody is said to be out of the first key, and is so in both senses of the word key; then the melody is carried on to a close in *d*, which is a third key, and with respect to that piece is indeed the principal key, in which also the piece begins; but I shall consider this again; it was enough to my purpose here, that all the notes from the beginning to the first close in *a* were natural to the octave from *a* with a 3d; and tho' the 3d above the close is not used, yet the 6th below it is used, which is the same thing in determining the species.

I return now to explain the reason and use of the signatures of clefs. And first, Let us suppose any piece of melody confined strictly to one mode or key, and let that be the natural sharp key *c*, from which as the relation of the letters are determined in the scale, there is a true musical series and gradation of notes, and therefore it requires no ♯ or ♭, consequently the signature of the clef must be plain. But let the piece be transposed to the key *d*, it must necessarily take *f*♯

inſtead of *f*, and *c* ♯ for *c*, becauſe *f* ♯ is the true 3d, and *c* ♯ the true 7th to *d*. Now if the clef be not ſigned with a ♯ on the ſeat of *f* and *c*, we muſt ſupply it wherever theſe notes occur through the piece; but it is much better that they ſhould be marked once for all at the beginning.

Again, ſuppoſe a piece of melody, in which there is a change of the key or mode; if the ſame ſignature anſwer all theſe keys, there is no more queſtion about it; but if that cannot be, then the ſignature ought to be adjuſted to the principal key, rather than to any other; it demands *f* ♯ and *c* ♯ for its 3d and 7th, therefore the ſignature expreſſeth them. The piece actually begins in the principal key, though the firſt cloſe is made in the 5th above, viz. in *a*, by bringing in *g* ♯; which is very naturally managed, becauſe all the notes from the beginning to that cloſe belong to both the ſharp keys *d* and *a*, except that *g* ♯ which is the only note in which they can differ: then you ſee the melody proceeds for ſome time in notes that are common to both theſe keys, though indeed the impreſſion of the laſt cadence will be ſtrongeſt; and then by bringing *g* (natural) and *a* ♯, it leaves both the former keys to cloſe in *b*; and here again there is as great a coincidence with the principal key as poſſible, for the flat key *b* has every one of its eſſential notes common with ſome one of theſe of the ſharp key *d*, except *a* ♯ and *g* ♯ which that flat key may occaſionally make uſe of.

To proceed with our ſignatures, you have, in what is ſaid the true uſe and reaſon of the ſignatures of clefs; in reſpect of which they are diſtinguiſhed into natural, and artificial or tranſpoſed clefs; the firſt is when no ♯ or ♭ is ſet at the beginning; and when there are, it is ſaid to be tranſpoſed. We ſhall next conſider the variety of ſignatures of clefs, which in all are about twelve, and the moſt reaſonable way of making the artificial notes, either in the general ſignature, or where they occur upon the change of the key.

In the ſemitonic ſcale there are twelve different notes in an octave (for the 13th is the ſame with the 1ſt) each of which may be made the fundamental or key of a ſong, i. e. from each of them we can take a ſeries of notes, that ſhall proceed concinnouſly by ſeven diatonick degrees of tones and ſemitones to an octave, in the ſpecies either of a ſharp or flat key, or of a greater or leſſer mode (the ſmall errors of this ſcale as it is fixt upon inſtruments, being in all this matter neglected.) Now, making each of theſe twelve letters or notes

notes a fundamental or key-note, there muſt be in the compaſs of an octave from each, more or fewer, or different ſharps and flats neceſſarily taken in to make a concinnous ſeries of the ſame ſpecies, i. e. proceeding by the greater or leſſer 3d (for theſe ſpecify the mode, and determine the other differences); and ſince from every one of the twelve keys we may proceed concinnouſly, either with a greater or leſſer 3d, and their accompanyments, it appears at firſt ſight, that there muſt be twenty-four different ſignatures of clefs, but you will eaſily underſtand that there are but twelve; for the ſame ſignature ſerves two different keys, whereof the one is a ſharp and the other a flat key, as you ſee plainly in the nature of the diatonick ſcale, in which the octave from *c* proceeds concinnouſly by a 3d, and that from *a* (which is a 6th above, or a 3d below *c*) by a 3d with the 6th and 7th for its accompanyments, which I ſuppoſe here eſſential to all flat keys; conſequently, if we begin at any other letter, and by the uſe of ♯ or ♭ make a concinnous diatonick ſeries of either kind, we ſhall have in the ſame ſeries, continued from the 6th above or 3d below, an octave of the other ſpecies; therefore there can be but twelve different ſignatures of clefs, whereof one is plain or natural, and eleven tranſpoſed or artificial.

What the proper notes of theſe tranſpoſed clefs are, you may find thus; let the ſcale of ſemitones be continued to two octaves, then begin at every letter, and, reckoning two ſemitones to every tone, take two tones and one ſemitone, then three tones and one ſemitone, which is the order of a ſharp key, or of the natural octave from *c*, the letters which terminate theſe tones and ſemitones, are the eſſential or natural notes of the key or octave, whoſe fundamental is the letter or note you begin at. By this you will find the notes belonging to every ſharp key; and theſe being continued, you will alſo have the notes belonging to every flat key, by taking the 6th above the ſharp key for the fundamental of the flat.

With reſpect to the names and ſignatures, there remain ſome things to be explained. I have told you that upon the main it was an indifferent thing, whether the artificial notes in the ſcale were named from the note below with a ♯, or from that above with a ♭. You have each of them marked, in ſome ſignatures ♯, and in others ♭; but in every particular ſignature the marks are all of one kind, ♯ or ♭, though one ſignature is ♯, and another ♭; and theſe are not ſo ordered at random; the reaſon I ſhall explain to you. In the firſt

place

place there is a greater harmony with reſpect to the eye; but this is a ſmall matter, a better reaſon follows. Conſider, every letter has two powers, i. e. is capable of repreſenting two notes, according as you take it natural or plain, as *c*, *d*, &c. or tranſpoſed as *c* ♯ or *d* ♭; again, every line and ſpace is the ſeat of one particular letter. Now if we take two powers of one letter in the ſame octave or key, the line or ſpace to which it belongs muſt have two different ſigns; and then when a note is ſet upon that line or ſpace, how ſhall it be known whether it is to be taken natural or tranſpoſed? This can only be done by ſetting the proper ſigns at every ſuch note; which is not only troubleſome, but renders the general ſignature uſeleſs as to that line or ſpace. This is the reaſon why ſome ſignatures are made ♯ rather than ♭, and contrarily; for example, take for the fundamental *c* ♯, the reſt of the notes to make a ſharp key are *d* ♯, *f*: *f* ♯, *g* ♯, *a* ♯, *c*, where you ſee *f* and *c* are taken both natural and tranſpoſed, which we avoid by making all the artificial note ♭; thus *d* ♭, *e* ♭, *f*: *g* ♭, *a* ♭, ♭, *c*, *d* ♭. 'Tis true that this might be helped another way, viz. by taking all the notes ♯, i. e. taking *e* ♯ for *f*, and *b* ♯ for *c*; but the inconveniency of this is viſible, for hereby we force two natural notes out of their places, whereby the difficulty of performing by ſuch direction is increaſed. In the other caſes where I have marked all ♭ rather than ♯, the ſame reaſons obtain. And in ſome caſes, ſome ways of ſigning with a ♯ would have both theſe inconveniencies. The ſame reaſons make it neceſſary to have ſome ſignature ♯ rather than ♭; but the octave beginning in *g* ♭ is ſingular in this reſpect, that it is equal which way it is ſigned, for in both there will be one natural note diſplaced unavoidably; *b* natural is ſigned *c* ♭, and if you make all the ſigns ♯, you muſt either take in two powers of one letter, or take *e* ♯ for *f*. Now neither in this, nor any of the other caſes will the mixing of the ſigns remove the inconveniencies; and ſuppoſe it could, another follows upon the mixture, which leads me to ſhew why the ſame clef is either all ♯ or all ♭, the reaſon follows.

The quantity of an interval expreſt by notes ſet upon lines and ſpaces marked ſome ♯, ſome ♭, will not be ſo eaſily diſcovered, as when they are all marked one way, becauſe the number of intermediate degrees from line to ſpace, and from ſpace to line, anſwers not to the denomination of the interval; for example, if it is a 5th, I ſhall more readily diſcover

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it when there are five intermediate degrees from line to ſpace, than if there were but four; thus, from *g* ſharp to *d* ſharp is a 5th, and will appear as ſuch by the degrees, among the lines and ſpaces; but if we mark it *g* ſharp, *e* ♭, it will have the appearance of a 4th; alſo from *f* ſharp to *a* ſharp is a 3d, and appears ſo, whereas from *f* ſharp to ♭ looks like a 4th; and for that reaſon Mr. Simpſon in his Compendium of Muſic calls it a leſſer 4th, which I think he had better called it an apparent 4th; and ſo by making the ſigns of the cliff all of one kind, this inconveniency is ſaved with reſpect to all intervals, whoſe both extremes have a tranſpoſed letter; and as to ſuch intervals which have one extreme a natural note, or expreſt by a plain letter, and the other tranſpoſed, the inconveniency is prevented by the choice of the ♯ in ſome keys, and of the ♭ in others; for example, from *d* to *f* ſharp is a 3d, equal to that from *d* to *g* ♭, but the firſt only appears like a 3d, the latter a 4th, and ſo of other intervals from *d*. Again from *f* to *b* ♭, or *f* to *a* ſharp is a 4th, but the firſt is the beſt way of marking it; there are no more tranſpoſed notes in that octave, nor any other octave, whoſe fundamental is a natural note, that is marked with ♭.

It muſt be owned, after all, that whatever way we chuſe the ſigns of tranſpoſed notes, the ſounds or notes themſelves on an inſtrument are individually the ſame; and marking them one way rather than another, reſpects only the conveniencies of repreſenting them to the eye, which ought not to be neglected; eſpecially for the direction of the human voice, becauſe that having no fixt ſounds (as an inſtrument has, whoſe notes may be found by a local memory of their ſeat on the inſtrument) we have not another way of finding the true note but computing the interval by the intermediate diatonic degrees, and the more readily this can be done, it is certainly the better.

Now you are to obſerve, that, as the ſignature of the clef is deſigned for, and can ſerve but one key, which ought rather to be the principal key or octave of the piece than any other, ſhewing what tranſpoſed notes belong to it, ſo the inconveniency laſt mentioned is remedied, by having the ſigns all of one kind, only for theſe intervals one of whoſe extremes is the key-note, or letter. But a ſong may modulate or change from the principal into other keys, which may require other notes than the ſignature of the clef affords; ſo we find ſharp and ♭ upon ſome particular notes contrary to the

the clef, which ſhews that themelody is out of the principal key, ſuch notes being natural to ſome other ſubprincipal key into which it is carried; and theſe ſigns are, or ought always to be choſen in the moſt convenient manner for expreſſing the interval; for example, the principal key being *c* with a 3d greater, which is a natural octave (i. e. expreſſed all with plain letters) ſuppoſe a change into its 4th *f*; and here let a 4th upward be required, we muſt take it in b or *a* ſharp; the firſt is the beſt way, but either of them contradicts the cliff which is natural; and we no ſooner find this than we judge the key is changed. But again, a change may be where this ſign of it cannot appear, viz. when we modulate into the 6th of a ſharp principal key, or into the 3d of a flat principal key, becauſe theſe have the ſame ſignature, as has been already ſhewn, and have ſuch a connection, that, unleſs by a cadence, the melody can never be ſaid to be out of the principal key. And with reſpect to a flat principal key, obſerve, that if the 6th *g*. and 7th *g*. are uſed, as in ſome circumſtances they may, eſpecially towards a cadence, then there will be neceſſarily required upon that 6th and 7th, another ſign than that with which its ſeat is marked in the general ſignature of the cliff, which marks all flat keys with the leſſer 6ths and 7ths; and therefore in ſuch caſe (i. e. where the principal key is flat) this difference from the clef is not a ſign that the melody leaves the key, becauſe each of theſe belong to it in different circumſtances; yet they cannot be both marked in the clef, therefore that which is of more general uſe is put there, and the other marked occaſionally.

From what has been explained, you learn another very remarkable thing, viz. to know what the principal key of any piece is, without ſeeing one note of it; and this is done by knowing the ſignature of the clef. There are but two kinds of keys (or modes of melody) diſtinguiſhed into ſharp and flat, as already explained; each of which may have any of the 12 different notes or letters of the ſemitonic ſcale for its fundamental; in the 1ſt and 6th line of the upper part of the preceding table you have all theſe fundamentals or key-notes, and under them reſpectively ſtand the ſignatures proper to each, in which, as has been often ſaid, the flat keys have their 6th and 7th marked of the leſſer kind; and therefore as by the key, or fundamental note, we know the ſignature, ſo reciprocally by the ſignature we can know the key; but

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'tis under this one limitation that, becauſe one ſignature ſerves two keys, a ſharp one, and a flat, which is the 6th above or 3d below the ſharp one, therefore we only learn by this, that it is one of them, but not which; for example, if the clef has no tranſpoſed note but *f* ♯, then the key is *g* with a 3d greater, or *e* with a 3d leſſer. If the clef has b and *e* b, the key is b with a 3d greater, or *g* with a 3d leſſer, and ſo of others, as in the table: I know indeed, for I have found it ſo in the writings of the beſt maſters, that they are not ſtrict and conſtant in obſerving this rule concerning the ſignature of the clef, eſpecially when the principal key is a flat one; in which caſe you'll find frequently, that when the 6th leſſer or 7th leſſer to the key, or both, are tranſpoſed notes, they don't ſign them ſo in the clef, but leave them to be marked as the courſe of the melody requires; which is convenient enough when the piece is ſo conducted as to uſe the leſſer 6th and 7th ſeldomer than the greater.

Of the NAME, with the various DEFINITIONS and DIVISIONS of the SCIENCE.

THE word Muſic comes to us from the Latin word Muſica, if not immediately from a Greek word of the ſame ſound, from whence the Romans probably took theirs; for they got much of their learning from the Greeks. Our criticks teach us, that it comes from the word Muſa, and this from a Greek word which ſignifies to ſearch or find out, becauſe the Muſes were feigned to be inventreſſes of the ſciences, and particularly of poetry and thoſe modulations of ſound that conſtitute muſic. But others go higher, and tell us, the word Muſa comes from a Hebrew word, which ſignifies art or diſcipline; hence Muſa and Muſica antiently ſignified learning in general, or any kind of ſcience; in which ſenſe you'll find it frequently in the works of the ancient philoſophers. But Kircher will have it from an Egyptian word; becauſe the reſtoration of it after the flood was probably there, by reaſon of the many reeds to be found in their fens, and upon the banks of the Nile. Heſychius tells us, that the Athenians gave the name of muſic to every art. From this it was that the Poets and Mytholo-

giſts feigned the nine Muſes daughters of Jupiter, who invented the ſciences, and preſided over them, to aſſiſt and inſpire thoſe who apply to ſtudy them, each having her particular province. In this general ſenſe we have it defin'd to be the orderly arangement and right diſpoſition of things; in ſhort, the agreement and harmony of the whole with its parts, and of the parts among themſelves. Hermes Triſmegiſtus ſays, That muſic is nothing but the knowledge of the order of all things; which was alſo the doctrine of the Pythagorean ſchool, and of the Platonicks, who teach that every thing in the univerſe is muſic. Agreeable to this wide ſenſe, ſome have diſtinguiſhed muſic into divine and mundane; the firſt reſpects the order and harmony that obtains among the celeſtial minds; the other reſpects the relations and order of every thing elſe in the univerſe. But Plato by the divine muſic underſtands, that which exiſts in the divine mind, viz. theſe archetypal ideas of order and ſymmetry, according to which God formed all things; and as this order exiſts in the creatures, it is called mundane muſic: Which is again ſubdivided, the remarkable denominations of which are, Firſt, Elementary or the harmony of the firſt elements of things; and theſe, according to the philoſophers, are fire, air, water, and earth, which tho' ſeemingly contrary to one another, are, by the wiſdom of the Creator, united and compounded in all the beautiful and regular forms of things that fall under our ſenſes. 2d. Celeſtial, comprehending the order and proportions in the magnitudes, diſtances, and motions of the heavenly bodies, and the harmony of the ſounds proceeding from theſe motions: For the Pythagoreans affirmed that they produce the moſt perfect conſort; the argument, as Macrobius in his commentary on Cicero's Somnium Scipionis has it, is to this purpoſe, viz. Sound is the effect of motion, and ſince the heavenly bodies muſt be under certain regular and ſtated laws of motion, they muſt produce ſomething muſical and concordant; for from random and fortuitous motions, governed by no certain meaſure, can only proceed a grating and unpleaſant noiſe: And the reaſon, ſays he, why we are not ſenſible of that ſound, is the vaſtneſs of it, which exceeds our ſenſe of hearing; in the ſame manner as the inhabitants near the cataracts of the Nile are inſenſible

of

of their prodigious noiſe. But ſome of the hiſtorians, if I remember right, tell us that by the exceſſiveneſs of the ſounds, theſe people are rendered quite deaf, which makes that demonſtration ſomewhat doubtful, ſince we hear every other ſound that reaches to us. Others alledge that the ſounds of the ſpheres, being the firſt we hear when we come into the world, and being habituated to them for a long time, when we could ſcarcely think or make reflection on any thing, we become incapable of perceiving them afterwards. But Pythagoras ſaid he perceived and underſtood the celeſtial harmony by a peculiar favour of that ſpirit to whom he owed his life, as Iamblichus reports of him, who ſays, That tho' he never ſung or played on any inſtrument himſelf, yet by an inconceivable ſort of divinity, he taught others to imitate the celeſtial muſic of the ſpheres, by inſtruments and voice: For according to him, all the harmony of ſounds here below, is but an imitation, and that imperfect too, of the other. This ſpecies is by ſome called particularly the mundane muſic. 3d. Human, which conſiſts chiefly in the harmony of the faculties of the human ſoul, and its various paſſions; and is alſo conſidered in the proportion and temperament, mutual dependence and connection, of all the parts of this wonderful machine of our bodies. 4th. Is what in a more limited and peculiar ſenſe of the word was called muſic; which has for its object motion, conſidered as under certain regular meaſures and proportions, by which it affects the ſenſes in an agreeable manner. All motion belongs to bodies, and ſound is the effect of motion, and cannot be without it; but all motion does not produce ſound, therefore this was again ſubdivided. Where the motion is without ſound, or as it is only the object of ſeeing, it was called muſica orcheſtria or ſaltatoria, which contains the rules for the regular motions of dancing; alſo Hypocritica, which reſpects the motions and geſtures of the Pantomimes. When motion is perceived only by the ear, i. e. when ſound is the object of muſic, there are three ſpecies; Harmonica, which conſiders the differences and proportion of ſounds, with reſpect to acute and grave; Rythmica, which reſpects the proportion of ſounds as to time, or the ſwiftneſs and ſlowneſs of their ſucceſſions; and Metrica, which belongs properly to the poets, and reſpects the verſifying

art: But in common acceptation 'tis now more limited, and we call nothing muſic but what is heard; and even then we make a variety of tones neceſſary to the being of muſic.

Ariſtides Quintilianus, who writes a profeſt treatiſe upon muſic, calls it the knowledge of ſinging, and of the things that are joined with ſinging (επιστημη μελους και των περι μελος συμβαινοντων, which Meibomius tranſlates, ſcientia cantus, eorumqquæ circa cantum contingunt) and theſe he calls the motions of the voice and body, as if the cantus itſelf conſiſted only in the different tones of the voice. Bacchius, who wrote a ſhort introduction to muſic in queſtion and anſwer, gives the ſame definition. Afterwards, Ariſtides conſiders muſic in the largeſt ſenſe of the word, and divides it into contemplative and active. The firſt, he ſays, is either natural or artificial; the natural is arithmetical, becauſe it conſiders the proportion of numbers; or phyſical, which diſputes of every thing in nature; the artificial is divided into Harmonica, Rythmica (comprehending the dumb motions) and Metrica: The active, which is the application of the artificial, is either enunciative (as in oratory,) organical (or inſtrumental performance,) Odical (for voice and ſinging of poems,) Hypocritical (in the motions of the pantomimes.) To what purpoſe ſome add hydraulical I do not underſtand, for this is but a ſpecies of the organical, in which water is ſome way uſed for producing or modifying the ſound. The muſical faculties, as they call them, are, melopœia, which gives rules for the tones of the voice or inſtrument, rythmopœia for motions, and poeſis for making of verſe. Again, explaining the difference of Rythmus and Metrum, he tells us, That Rythmus is applied thee ways; either to immoveable bodies, which are called eurythmoi, when their parts are rightly proportioned to one another, as a well made ſtatue; or to every thing that moves, ſo we ſay a man walks handſomely (compoſite,) and under this dancing will come the buſineſs of the pantomimes; or particularly to the motion of ſound or the voice, in which the rythmus conſiſts of long and ſhort ſyllables or notes, (which he calls times) joined together (in ſucceſſion) in ſome kind of order, ſo that their cadence upon the ear may be agreeable; which conſtitutes in oratory what is called a numerous ſtile, and

and when the tones of the voice are well choſen 'tis an harmonious ſtile. Rythmus is perceived either by the eye or the ear, and is ſomething general, which may be without metrum; but this is perceived only by the ear, and is but a ſpecies of the other, and cannot exiſt without it: The firſt is perceived without ſound in dancing; and when it exiſts with ſounds it may either be without any difference of acute and grave, as in a drum, or with a variety of theſe, as in a ſong, and then the harmonica and rythmica are joined; and if any poem is ſet to muſic, and ſung with a variety of tones, we have all the three parts of muſic at once. Porphyrius in his commentaries on Ptolemy's Harmonicks, inſtitutes the diviſion of muſic another way; he takes it in the limited ſenſe, as having motion both dumb and ſonorous for its object; and, without diſtinguiſhing the ſpeculative and practical, he makes its parts theſe ſix, viz. Harmonica, Rythmica, Metrica, Organica, Poetica, Hypocritica; he applies the Rythmica to dancing, Metrica to the enunciative, and Poetica to verſes.

All the other antient Authors agree in the ſame threefold diviſion of muſic into Harmonica, Rythmica, and Metrica: Some add the Organica, others omit it, as indeed it is but an accidental thing to muſic, in what ſpecies of ſounds it is expreſt. Upon this diviſion of muſic, the more ancient writers are very careful in the inſcription or titles of their books, and call them only Harmonica, when they confine themſelves to that part, as Ariſtoxenus, Euclid, Nicomachus, Gaudentius, Ptolomy, Bryennius; but Ariſtides and Bacchius call theirs muſica, becauſe they profeſs to treat of all the parts. The Latins are not always ſo accurate, for they inſcribe all theirs muſica, as Boethius, tho' he only explains the harmonica; and St. Auguſtin, tho' his ſix books de muſica ſpeak only of the rythmus and metrum; Martianus Capella has a better right to the title, for he makes a kind of compend and tranſlation of Ariſtides Quintilian, tho' a very obſcure one of as obſcure an original. Aurelius Caſſiodorus needs ſcarcely be named, for tho' he writes a book de muſica, 'tis but barely ſome general definitions and diviſions of the ſcience.

The harmonica is the part the antients have left us any tolerable account of, which is at beſt but very general

neral and theorical; ſuch as it is, I purpoſe to explain it to you as diſtinctly as I can; but having thus far ſettled the definition and diviſion of muſic as delivered by the antients, I chuſe next to conſider it hiſtorically.

The Invention and Antiquity of MUSIC, with the Excellency of the Art in the various Ends and Uſes of it.

OF all human arts muſic has juſteſt pretences to the honour of antiquity: We ſcarce need any authority for this aſſertion; the reaſon of the thing demonſtrates it, for the conditions and circumſtances of human life required ſome powerful charm, to bear up the mind under the anxiety and cares that mankind ſoon after his creation became ſubject to; and the goodneſs of our bleſſed Creator ſoon diſcovered itſelf in the wonderful relief that muſic affords againſt the unavoidable hardſhips which are annexed to our ſtate of being in this life; ſo that muſic muſt have been as early in the world as the moſt neceſſary and indiſpenſable arts. For

If we conſider how natural to the mind of man this kind of pleaſure is, as conſtant and univerſal experience ſufficiently proves, we cannot think he was long a ſtranger to it. Other arts were revealed as bare neceſſity gave occaſion, and ſome were afterwards owing to luxury; but neither neceſſity nor luxury are the parents of this heavenly art; to be pleaſed with it ſeems to be a part of our conſtitution; but 'tis made ſo, not as abſolutely neceſſary to our being, 'tis a gift of God to us for our more happy and comfortable being; and therefore we can make no doubt that this art was among the very firſt that were known to men. It is reaſonable to believe, that as all other arts, ſo this was rude and ſimple in its beginning, and by the induſtry of man, prompted by his natural love of pleaſure, improved by degrees. If we conſider, again, how obvious a thing ſound is, and how manifold occaſions it gives for invention, we are not only further confirmed in the antiquity of this art, but we can make very ſhrewd gueſſes about the firſt diſcoveries of it. Vocal muſic was certainly the firſt kind; man had not only the various tones of his own voice to make his obſervations upon, before any other arts

arts or inſtruments were found, but being daily entertained by the various natural ſtrains of the winged choirs, how could he not obſerve them, and from thence take occaſion to improve his own voice, and the modulations of ſound, of which it is capable? 'Tis certain that whatever theſe ſingers were capable of, they poſſeſt it actually from the beginning of the world; we are ſurpriſed indeed with their ſagacious imitations of human art in ſinging, but we know no improvements the ſpecies is capable of; and if we ſuppoſe that in theſe parts where mankind firſt appeared, and eſpecially in theſe firſt days, when things were probably in their greateſt beauty and perfection, the ſinging of birds was a more remarkable thing, we ſhall have leſs reaſon to doubt that they led the way to mankind in this charming art: But this is no new opinion; of many antient authors, who agree in this very juſt conjecture, I ſhall only let you hear Lucretius Lib. 5.

At liquidas avium voces imitarier ore
Ante fuit multo, quam lævia carmina cantu
Concelebrare homines poſſent, aureiſque juvare.

The firſt invention of wind-inſtruments he aſcribes to the obſervation of the whiſtling of the winds among the hollow reeds.

Et zephyri cava per calamorum ſibila primum
Agreſteis docuere cavas inflare cicutas,
Inde minutatim dulceis didicere querelas,
Tibia quas fundit digitis pulſata canentum.

or they might alſo take that hint from ſomething that might happen accidentally to them in their handling of corn-ſtalks, or the hollow ſtems of other plants. And other kinds of inſtruments were probably formed by ſuch like accidents: There were ſo many uſes for chords or ſtrings, that men could not but very ſoon obſerve their various ſounds, which might give riſe to ſtringed inſtruments: And for the pulſatile inſtruments, as drums and cymbals, they might ariſe from the obſervation of the hollow noiſe of concave bodies. To make this account of the invention of inſtruments more probable, Kircher bids us conſider, That the firſt mortals living a paſtoral life, and being conſtantly in the fields, near rivers and among woods, could not be perpetually idle; 'tis probable therefore, ſays he, That the invention of pipes

and

and whiſtles was owing to their diverſions and exerciſes on theſe occaſions; and becauſe men could not be long without having uſe for chords of various kinds, and variouſly bent, theſe, either by being expoſed to the wind, or neceſſarily touched by the hand, might give the firſt hint of ſtringed inſtruments; and becauſe, even in the firſt ſimple way of living, they could not be long without ſome fabrile arts, this would give occaſion to obſerve various ſounds of hard and hollow bodies, which might raiſe the firſt thought of the pulſatile inſtruments; hence he concludes that muſic was among the firſt arts.

If we conſider next, the opinion of thoſe that are antients to us, who yet were too far from the beginning of things to know them any other way than by tradition and probable conjecture; we find an univerſal agreement in this truth, That muſic is as ancient as the world itſelf, for this very reaſon, that it is natural to mankind. It will be needleſs to bring many authorities, one or two ſhall ſerve: Plutarch in his treatiſe of muſic, which is nothing but a converſation among friends, about the invention, antiquity and power of muſic, makes one aſcribe the invention to Amphion the ſon of Jupiter and Antiaopa, who was taught by his father; but in the naming of another he makes Apollo the author, and to prove it, alledges all the antient ſtatues of this god, in whoſe hand a muſical inſtrument was always put. He adduces many examples to prove the natural influence muſic has upon the mind of man, and ſince he makes no leſs than a god the inventor of it, and the gods exiſted before men, 'tis certain he means to prove, both by tradition and the nature of the thing, that it is the moſt ancient as well as the moſt noble ſcience. Quintilian (lib. 1. cap 11.) alledges the authority of Timagenes to prove that muſic is of all the moſt ancient ſcience; and he thinks the tradition of its antiquity is ſufficiently proved by the ancient poets, who repreſent muſicians at the table of kings, ſinging the praiſes of the gods and heroes. Homer ſhews us how far muſic was advanced in his days, and the tradition of its yet greater antiquity, while he ſays it was a part of his Hero's education. The opinion of the divine original and antiquity of muſic, is alſo proved by the fables of the muſes, ſo univerſal among the poets; and by the

the diſputes among the Greek writers concerning the firſt authors, ſome for Orpheus, ſome for Amphion, ſome for Appollo, &c. As the beſt of the philoſophers owned the providence of the gods, and their particular love and benevolence to mankind, ſo they alſo believed that muſic was from the beginning a peculiar gift and favour of heaven; and no wonder, when they looked upon it as neceſſary to aſſiſt the mind to a raiſed and exalted way of praiſing the gods and good men.

I ſhall add but one teſtimony more, which is that of the ſacred writings, where Jubal the ſixth from Adam, is called the "father of ſuch as handle the harp and organ;" whether this ſignifies that he was the inventor, or one who brought theſe inſtruments to a good perfection, or only one who was eminently ſkilled in the performance, we have ſufficient reaſon to believe that muſic was an art long before his time; ſince it is rational to think that vocal muſic was known long before inſtrumental, and that there was a gradual improvement in the art of modulating the voice; unleſs Adam and his ſons were inſpired with this knowledge, which ſuppoſition would prove the point at once. And if we could believe that this art was loſt by the flood, yet the ſame nature remaining in man, it would ſoon have been recovered; and we find a notable inſtance of it in the ſong of praiſe which the Iſraelites raiſed with their voices and timbrels to God, for their deliverance at the Red Sea; from which we may reaſonably conjecture it was an art well known, and of eſtabliſhed honour long before that time.

It may be expected in this place, that there ſhould be given a more particular hiſtory of the inventor of muſic and muſical inſtruments, and other famous muſicians ſince the flood. As to the invention, there is enough ſaid already to ſhow that muſic is natural to mankind; and therefore inſtead of inventors, the enquiry ought properly to be about the improvers of it; and it would come in very naturally here: but the truth is, we have ſcarce any thing left as we can depend upon in this matter; or at leaſt we have but very general hints, and many of them contrary to each other, from authors that ſpeak of theſe things in a tranſient manner: and as we have no writings of the age in which muſic was firſt reſtored after the flood, ſo the accounts we have are ſuch uncertain traditions, that no two authors agree in every thing. Greece was the country in Europe where learning firſt flouriſhed;

and though we believe they drew from other fountains, as Egypt, and the more eaſtern parts, yet they are the fountains to us, and to all the weſtern world: other antiquities we neither know ſo well, nor ſo much of, at leaſt of ſuch as have any pretence to a greater antiquity, except the Jewiſh; and though we are ſure they had muſic, yet we have no account of the inventors among them, for it is probable they learned it in Egypt; and therefore this enquiry about the inventors of muſic ſince the flood muſt be limited to Greece. Plutarch, Julius Polux, Atheneus, and a few more, are the authorities we have principally to truſt to, who take what they ſay from other more ancient authors of their tradition.

Amphion the Theban, is by ſome reckoned the moſt ancient muſician in Greece, and the inventor of it, as alſo of the lyre. Some ſay Mercury taught him and gave him a lyre of ſeven ſtrings. He is ſaid to be the firſt who taught to play and ſing together. The time he lived in is not agreed upon.

Chiron the Pelithronian, reckoned a demigod, the ſon of Saturn and Phyllira, is the next great maſter; the inventor of medicine, a famous philoſopher and muſician, who had for his ſcholars Æſculapius, Jaſon, Hercules, Theſeus, Achilles, and other heroes.

Demodocus is another celebrated muſician, of whom already.

Hermes, or Mercury Triſmigiſtus, another demigod, is alſo reckoned amongſt the inventors or improvers of muſic and of the lyre.

Linus was a famous poet and muſician, ſome ſay he taught Hercules, Thamyris and Orpheus, and even Amphion. To him ſome aſcribe the invention of the lyre.

Olympus the Myſian, is another benefactor to muſic; he was the diſciple of Marſyas the ſon of Hyagnis the Phrygian; this Hyagnis is reckoned the inventor of the tibiæ, which others aſcribe to the muſe Euterpe, as Horace inſinuates, "Sinaeque tibias Euterpe cohibet."

Orpheus the Thracian, is alſo reckoned the author, or at leaſt the introducer of various arts into Greece, among which is muſic; he practiſed the lyre he got from Mercury. Some ſay he was maſter to Thamyris and Linus.

Phemius of Ithaca. Ovid uſes his name for any excellent muſician: Homer alſo names him honourably.

Terpander the Leſbian, lived in the time of Lycurgus, and ſet his laws to muſic. He was the firſt who among the Spartans applied melody to poems, or taught them to be ſung in regular meaſures. This is the famous muſician who quelled a ſedition at Sparta by his muſic. He and his followers as ſaid to have firſt inſtituted the muſical mode, uſed in ſinging hymns to the gods; and ſome attribute the invention of the lyre to him.

Thales the Cretan was another great maſter, honourably entertained by the Lacedemonians for inſtructing their youth. Of the wonders he wrought by his muſic, we ſhall hear again.

Thamyris the Thracian was ſo famous, that he is feigned to have contended with the muſes, upon condition he ſhould poſſeſs all their power if he overcame, but if they were victors he conſented to loſe what they pleaſed; and being defeated, they put out his eyes, ſpoiled his voice, and ſtruck him with madneſs. He was the firſt who uſed inſtrumental muſic without ſinging.

Theſe are the remarkable names of muſicians before Homer's time, who himſelf was a muſician, as was the famous poet Pinda. You may find the characters of theſe mentioned at more large, in the firſt book of *Fabritius*'s *Bibliotheca Græca*,

We find others of a latter date, who were famous in muſic, as Laſus Hermionenſis, Melanippides, Philoxenus, Timotheus, Phrynnis, Epigonius, Lyſander, Simmicus, Diodorous the Theban; who were authors of a great variety and luxurious improvements in muſic. Laſus, who lived in the time of Darius Hyſtaſpes, is reckoned the firſt who ever wrote a treatiſe upon muſic. Epigonius was the author of an inſtrument called epigonium, of 40 ſtrings, he introduced playing on the lyre with the hand without a plectrum, and was the firſt who joined the Cithara and Tibia in one concert, altering the ſimplicity of the more ancient muſic; as Lyſander did by adding a great many ſtrings to the Cythara. Simicus alſo invented an inſtrument called ſimmicicum of 35 ſtrings. Diodorus improved the tibia, which at firſt had but four holes, by contriving more holes and notes.

Timotheus, for adding a ſtring to his lyre was fined by the Lacedemonians, and the ſtring ordered to be taken away. Of him and Phrynnis, the comic poet Pherecrates

makes bitter complaints in the name of muſic, for corrupting and abuſing her, as Plutarch reports; for, among others, they chiefly had completed the ruin of the ancient ſimple muſic, which ſays Plutarch, was nobly uſeful in the education and forming of youth, and the ſervice of the temples, and uſed principally to theſe purpoſes, in the ancient times of greateſt wiſdom and virtue, but was ruined after theatrical ſhews came to be ſo much in faſhion, ſo that ſcarcely the memory of theſe ancient modes remained in his time. You ſhall have ſome account afterwards of the ancient writers of muſic.

As we have but uncertain acconuts of the inventors of muſical inſtruments among the ancients, ſo we have as imperfect an account of what theſe inſtruments were, ſcarce knowing them any more than by name. The general diviſion of inſtruments, is into ſtringed inſtruments, wind inſtruments and the pulſatile kind; of this laſt we hear of the tympanum or cymbalum, of the nature of our drum; the Greeks gave it the laſt name from its figure, reſembling a boat.

There were alſo the crepitaculum, tintinabulum, crotalum ſiſtrum; but by any accounts we have, they look rather like childrens rattles and play things than muſical inſtruments.

Of wind-inſtruments, we hear of the tibia, ſo called from the ſhank-bone of ſome animals, as cranes, of which they were firſt made. And fiſtula made alſo of reeds. But theſe were afterwards made of wood and alſo of metal. How they were blown, whether as flutes or hautboys or otherwiſe, and which the one way, and which the other, is not ſufficiently manifeſt. It is plain ſome had holes, which at firſt were but few, and afterwards increaſed to a greater number; ſome had none; ſome were ſingle pipes, and ſome a combination of ſeverals, particularly Pan's ſyringa, which conſiſted of ſeven reeds joined together ſide-ways; they had no holes, each giving but one note, in all ſeven diſtinct notes, but at what mutual diſtances is not very certain, though perhaps they were the notes of the natural or diatonic ſcale, but by this means they would want an 8ve, and therefore probably otherwiſe conſtituted. Sometimes they played on a ſingle pipe, ſometimes on two together, one in each hand. And leſt we ſhould think there could muſic be expreſſed by one hand, If. Voſſias alledges, they had a contrivance by which they made one hole expreſs ſeveral notes, and cites a paſſage of

Arcadius

Arcadius the grammarian to prove it; that author ſays indeed, that there were contrivances to ſhut and open the holes when they had a mind, by pieces of horn he calls Bombyces and Opholmioi (which Julius Pollux alſo mentions as parts of ſome kind of tibiæ) turning them upwards or downwards, inwards or outwards: but the uſe of this is not clearly taught us, and whether it was that the ſame pipe might have more notes than holes, which might be managed by one hand: perhaps it was no more than a like contrivance in our common bagpipes, for tuning the drones to the key of the ſong. We are alſo told that Hyagnis contrived the joining of two pipes, ſo that one canal conveyed wind to both, which therefore were always ſounded together.

We hear alſo of Organs, blown at firſt by a kind of air-pump, where alſo water was ſome way uſed, and hence called, organum hydraulicum; but afterwards they uſed bellows. Vitruvious, has an obſcure deſcription of it, which Iſ. Voſſius and Kircher both endeavour to clear.

There were tubæ, and cornua, and litui, of the trumpet kind, of which there were different ſpecies invented by different people. They talk of ſome kind of tubæ, that without any art in the modulation, had ſuch a prodiguous ſound, that was enough to terrify one.

Of ſtringed inſtruments, the firſt is the lyre or cithara (which ſome diſtinguiſh:) Mercury is ſaid to be inventor of it, in this manner; after an inundation of the Nile he found a dead ſhell-fiſh, which the Greeks call chelone, and the Latins teſtudo; of this ſhell he made his lyre, mounting it with ſeven ſtrings, as Lucian ſays; and added a kind of jugum to it, to lengthen the ſtrings, but not ſuch as our violins have, whereby one ſtring contains ſeveral notes; by the common form this jugum ſeems no more than two diſtinct pieces of wood, ſet parallel, and at ſome diſtance, but joined at the farther end, where there is a head to receive pins for ſtretching the ſtrings. Boethius reports the opinion of ſome that ſay, the lyre mercurii had but four ſtrings in imitation of the mundane muſic of the four elements: but Diodorus Siculus ſays, it had only three ſtrings, in imitation of the three ſeaſons of the year, which were all the ancient Greeks counted viz. Spring, ſummer and winter. Nicomachus, Horace, Lucian and others ſay, it had ſeven ſtrings in imitation of the ſeven planets. Some reconcile

Diodorus,

Diodorus, with the laſt, thus, they ſay the more ancient lyre had but three or four ſtrings, and Mercury added other three, which made up ſeven. Mercury gave this ſeven ſtringed lyre to Orpheus, who being torn to pieces by the Baccannals, the lyre was hung up in Apollo's temple by the Leſbians: But others ſay, Pythagorus found it in ſome temple of Egypt, and added an eighth ſtring. Nicomachus ſays, Orpheus being killed by the Thracian woman, for contemning their religion in the Bacchanalian rites, his lyre was caſt into the ſea, and thrown up at Antiſſa a city of Leſbos; the fiſhers finding it gave it to Terpander, who carrying it to Egypt, gave it to the prieſts, and called himſelf the inventor. Thoſe who call it four ſtringed, make the proportions thus, betwixt the 1ſt and 2d, the interval of a 4th, 3: 4, betwixt the 2d and 3d, a tone 8: 9, and betwixt the 3d and 4th ſtring another 4th: the ſeven ſtrings were diatonically diſpoſed by tones and ſemitones, and Pythagoras's eighth ſtring made up the octave.

The occaſion of aſcribing the invention of this inſtrument to ſo many authors, is probably, that they have each in different places invented inſtruments much reſembling other. However ſimple it was at firſt, it grew to a great number of ſtrings; but it is to no purpoſe to repeat the names of theſe who are ſuppoſed to have added new ſtrings to it.

From this inſtrument, which all agree to be firſt of the ſtringed kind in Greece, aroſe a multitude of others, differing in their ſhape and number of ſtrings, of which we have but indiſtinct accounts. We hear of the pſalterium, trigon, ſambuca, pectis, magadis, barbiton, teſtudo (the two laſt uſed by Horace promſcuouſly with the lyre and cithara) epigonium, ſimicium, pandura, which were all ſtruck with the hand or a plectrum; but it does not appear that they uſed any thing like the bows of hair we have now for violins, which is a moſt noble contrivance for making long and ſhort ſounds, and giving them a thouſand modifications it is impoſſible to produce by a plectrum.

Kircher alſo obſerves, that in all the ancient monuments, where inſtruments are put in the hands of Apollo and the muſes, as there are many of them at Rome, ſays he, there is none to be found with ſuch a jujum as our violins have, whereby each ſtring has ſeveral notes, but every ſtring has only one note; and this he makes an argument of the ſimplicity

plicity and imperfection of their inſtruments. Beſides ſeveral forms of the lyre kind, and ſome fiſtulæ, he is poſitive they had no inſtruments worth naming. He conſiders how careful they were to tranſmit, by writing and other monuments, their moſt trifling inventions, that they might not loſe the glory of them; and concludes, if they had any thing more perfect, we ſhould certainly have heard of it, and had it preſerved, when they were at pains to give us the figure of their trifling reed-pipes, which the ſhepherds commonly uſed. But indeed I find ſome paſſages that cannot be well underſtood, without ſuppoſing they had inſtruments in which one ſtring had more than one note: where Pherecrates (already mentioned) makes muſic complain of her abuſes from Timotheus's innovations; ſhe ſays, he had deſtroyed her who had twelve harmonies in five ſtrings; whether theſe harmonies ſignify ſingle notes or conſonances, it is plain each ſtring muſt afforded more than one note. And Plutarch aſcribes to Terpander a lyre of three chords, yet he ſays it had ſeven ſounds, i. e. notes.

Thoſe who are curious to hear more of this, and ſee the figures of inſtruments both ancient and modern, muſt go to Merſennus and Kircher.

The Excellency and various Uses of MUSIC.

THOUGH the reaſons alledged for the antiquity of muſic, ſhew us the dignity of it, yet I believe it will be agreeable to enter into a more particular hiſtory of the honour muſic was in among the ancients, and of its various ends and uſes, and the pretended virtues and powers of it.

The reputation this art was in with the Jewiſh nation, is, I ſuppoſe, well known by the ſacred hiſtory. Can any thing ſhew the excellency of an art more, than that it was reckoned uſeful and neceſſary in the worſhip of God; and as ſuch, diligently practiſed and cultivated by a people ſeparated from the reſt of mankind, to be with ſtes for the Almighty, and preſerve the true knowledge of God [illegible] earth? I have already [illegible] raelites ſong upon the delivery a [illegible] to prove that muſic [illegible] proved and ſtated ma [illegible] not doubt that [illegible]

of God, and Miriam the propheteſs, were the chiefs of this ſacred choir: and that from this time to that of the royal prophet David, the art was honoured and encouraged by them both publicly and privately, we can make no doubt; for when Saul was troubled with an evil ſpirit from the Lord, he is adviſed to call for a cunning player upon the harp, which ſuppoſes it was a well known art in that time; and behold, David, yet an obſcure and private perſon, being famous for his ſkill in muſic, was called; and upon his playing, "Saul was refreſhed and was well, and the evil ſpirit departed from him." Nor when David was advanced to the kingdom thought he this exerciſe below him, eſpecially the religious uſe of it. When the ark was brought from Kirjath-jearim, "David and all Iſrael played before God with all their might, and with ſinging, and with harps, and with pſalteries, and with timbrels, and with cymbals, and with trumpets," 1 Chron. xiii. 8. And the ark being ſet up in the city of David, what a ſolemn ſervice was inſtituted for the public worſhip and praiſe of God; ſingers and players on all manner of inſtruments, "to miniſter before the ark of the Lord continually, to record, and to thank, and praiſe the Lord God of Iſrael!" Theſe ſeem to have been divided into three choirs, and over them appointed three Coragi or maſters, Aſaph, Heman and Jeduthun, both to inſtruct them and to preſide in the ſervice: but David himſelf was the chief muſician and poet of Iſrael. And when Solomon had finiſhed the temple, behold, at the dedication of it, "the Levites which were the ſingers, all of them of Aſaph, of Heman, of Jeduthun, having cymbals, and pſalteries, and harps, ſtood at the eaſt-end of the alter, praiſing and thanking the Lord." And this ſervice, as David had appointed before the ark, continued in the temple; for we are told, that the king and all the people having dedicated the houſe to God, "The prieſts waited on their offices; the Levites alſo with inſtruments of muſic of the Lord, which David the king had made to praiſe the Lord.

The prophet Eliſha knew the virtue of muſic, when he called for a minſtril to compoſe his mind (as is reaſonably ſuppoſed) before "the hand of Lord came upon him."

To this I ſhall add the opinion and teſtimony of St. Chryſoſtom, in his commentary on 40th Pſalm, he ſays to this purpoſe, 'That God knowing Men to be backward and ſlothful in ſpiritual things, and impatient of the labour and pains which they require, willing to make the taſk more agreeable, and prevent

vent our wearineſs, he joined melody or muſic with his worſhip; that as we are all naturally delighted with harmonious numbers, we might with readineſs and chearfulneſs of mind expreſs his praiſe in ſacred hymns. For, ſays he, nothing can raiſe the mind, and, as it were, give wings to it, free it from earthlineſs, and the confinement 'tis under by union with the body, inſpire it with the love of wiſdom, and make every thing pertaining to this life agreeable, as well modulated verſe and divine ſongs harmoniouſly compoſed. Our natures are ſo delighted with muſic, and we have ſo great and neceſſary inclination and tendency to this kind of pleaſure, that even infants at the breaſt are ſoothed and lulled to reſt by this means.' Again he ſays, 'Becauſe this pleaſure is ſo familiar and connate with our minds, that we might have both profit and pleaſure, God appointed pſalms, that the Devil might not ruin us with profane and wicked ſongs.' And tho' there be now ſome difference of opinion about its uſe in ſacred things, yet all chriſtians keep up the practice of ſinging hymns and pſalms, which is enough to confirm the general principle of muſic's ſuitableneſs to the worſhip of God.

In St. John's viſion, the elders are repreſented with harps in their hands; and tho' this be only repreſenting things in heaven, in a way eaſieſt for our conception, yet we muſt ſuppoſe it to be a compariſon to the beſt manner of worſhipping God among men, with reſpect at leaſt to the means of compoſing and raiſing our minds, or keeping out other ideas, and thereby fitting us for entertaining religious thoughts.

Let us next conſider the eſteem and uſe of it among the ancient Greeks and Romans. The glory of this art among them, eſpecially the Greeks, appears firſt, according to the obſervation of Quintilian, by the names given to the poets and muſicians, which at the beginning were generally the ſame perſon, and their characters thought to be ſo connected, that the names were reciprocal; they were called Sages or Wiſemen, and the inſpired. Salmuth on Pancirollus cites Ariſtophanes to prove, that by citharæ callens, or one that was ſkilled in playing on the cithara, the ancients meant a wiſe man, who was adorned with all the graces; as they

reckoned one who had no ear or genius to muſic, ſtupid, or whoſe frame was diſordered, and the elements of his compoſition at war among themſelves. And ſo high an opinion they had of it, that they thought no induſtry of man could attain to ſuch an excellent art; and hence they believed this faculty to be an inſpiration from the Gods; which alſo appears particularly by their making Apollo the author of it, and then making their moſt ancient muſicians, as Orpheus, Linus, and Amphion, of divine offspring. Homer, who was himſelf both poet and muſician, could have ſuppoſed nothing more to the honour of his profeſſion, than making the Gods themſelves delighted with it; after the fierce conteſt that happened among them about the Grecian and Trojan affairs, he feigns them recreating themſelves with Apollo's muſic; and after this, 'tis no wonder he thought it not below his Hero to have been inſtructed in, and a diligent practiſer of this Godlike art. And do not the poets univerſally teſtify this opinion of the excellency of muſic, when they make it a part of the entertainment at the tables of kings; where to the ſound of the lyre they ſung the praiſes of the Gods and Heroes, and other uſeful things: As Homer in the Odyſſea introduces Demodocus at the table of Alcinous, King of Phæacea, ſinging the Trojan war and the praiſes of the Heroes: And Virgil brings in Jopas at the table of Dido, ſinging to the ſound of his golden harp, what he had learned in natural philoſophy, and particularly in aſtronomy from Atlas; upon which Quintilian makes this reflection, that hereby the poet intends to ſhew the connection there is between muſic and heavenly things; and Horace teaches us the ſame doctrine, when addreſſing his lyre, he cries out, "O decus Phœbi, & dapibus ſupremi, grata teſtudo, Jovis.

At the beginning, muſic was perhaps ſought only for the ſake of innocent pleaſure and recreation; in which view Ariſtotle calls it the medicine of that heavineſs that proceeds from labour; and Horace calls his lyre laborem dulce lenimen: And as this is the firſt and moſt ſimple, ſo it is certainly no deſpicable uſe of it; our circumſtances require ſuch a help to make as undergo the neceſſary toils of life more chearfully. Wine and muſic chear the heart, ſaid the wiſe man; and that the

the ſame power ſtill remains, does plainly appear by univerſal experience. Men naturally ſeek pleaſure, and the wiſer ſort ſtudying how to turn this deſire into the greateſt advantage, and mix the utile dulci, happily contrived, by bribing the ear, to make way into the heart. The ſevereſt of the philoſophers approved of muſic, becauſe they found it a neceſſary means of acceſs to the minds of men, and of engaging their paſſions on the ſide of virtue and the laws; and ſo muſic was made an handmaid to virtue and religion.

Jamblichus in the life of Pythagoras tells us, That muſic was a part of the diſcipline by which he formed the minds of his ſcholars. To this purpoſe he made, and taught them to make and ſing, verſes calculated againſt the paſſions and diſeaſes of their minds; which were alſo ſung by a chorus, ſtanding round one that played upon the lyre, the modulations whereof were perfectly adapted to the deſign and ſubject of the verſes. He uſed alſo to make them ſing ſome choice verſes out of Homer and Heſiod. Muſic was the firſt exerciſe of his ſcholars in the morning; as neceſſary to fit them for the duties of the day, by bringing their minds to a right temper; particularly he deſigned it as a kind of medicine againſt the pains of the head, which might be contracted in ſleep: And at night, before they went to reſt, he taught them to compoſe their minds after the perturbations of the day, by the ſame exerciſe.

Whatever virtue the Pythagoreans aſcribed to muſic, they believed the reaſon of it to be, That the ſoul itſelf conſiſted of harmony; and therefore they pretended by it to revive the primitive harmony of the faculties of the ſoul. By this primitive harmony they meant that which, according to their doctrine, was in the ſoul in its pre-exiſtent ſtate in heaven. Macrobius, who is plainly Pythagorean in this point, affirms, That every ſoul is delighted with muſical ſounds; not the polite only but the moſt barbarous nations practiſe muſic, whereby they are excited to the love of virtue, or diſſolved in ſoftneſs and pleaſure: The reaſon is, ſays he, That the ſoul brings into the body with it the memory of the muſic which it was entertained with in heaven: And there are certain nations, ſays he, That attend the dead to their burial with ſinging; becauſe they

believe the ſoul returns to heaven the fountain or original of muſic. Lib. 2. in Somnium Scipionis. And becauſe this ſect believed the Gods themſelves to have celeſtial bodies of a moſt perfect harmonious compoſition, therefore they thought the Gods were delighted with it; and that by our uſe of it in ſacred things, we not only compoſe our minds, and fit them better for the contemplation of the Gods, but imitate their happineſs, and thereby are acceptable to them, and open for ourſelves a return into heaven.

Athenæus reports of one Clinias a Pythagorean, who, being a very choleric and wrathful man, as ſoon as he found his paſſion begin to riſe, took up his lyre and ſung, and by this means allayed it. But this diſcipline was older than Pythagoras; for Homer tells us, That Achilles was educated in the ſame manner by Chiron, and feigns him, after the hot diſpute he had with Agamemnon, calming his mind with his ſong and lyre: And tho' Homer ſhould be the author of this ſtory, it ſhews however that ſuch an uſe was made of muſic in his days; for 'tis reaſonable to think he had learned this from experience.

The virtuous and wiſe Socrates was no leſs a friend to this admirable art; for even in the decline of his age he applied himſelf to the lyre, and carefully recommended it to others. Nor did the divine Plato diſſer from his great maſter in this point; he allows it in his common-wealth; and in many places of his works ſpeaks with the greateſt reſpect of it, as a moſt uſeful thing in ſociety. He ſays it has as great influence over the mind, as the air has over the body; and therefore he thought it was worthy of the law to take care of it. He underſtood the principles of the art ſo well, that, as Quintilian juſtly obſerves, there are many paſſages in his writings not to be underſtood without a good knowledge of it. Ariſtotle in his politics agrees with Plato in his ſentiments of muſic.

Ariſtides the philoſopher and muſician, in the introduction to his treatiſe on this ſubject, ſays, 'tis not ſo confined either as to the ſubject matter or time as other arts and ſciences, but adds ornament to all the parts and actions of human life: Painting, ſays he, attains that good which regards the eye, medicine and gymnaſtic

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are good for the body, dialectic and that kind helps to acquire prudence, if the mind be firſt purged and prepared by muſic. Again, it beautifies the mind with the ornaments of harmony, and forms the body with decent motions: 'tis fit for young ones, becauſe of the advantages got by ſinging; for perſons of more age, by teaching them the ornaments of modulate diction, and of all kinds of eloquence; to others more advanced it teaches the nature of number, with the variety of proportions, and the harmony that thereby exiſts in all bodies, but chiefly the reaſons and nature of the ſoul. He ſays, as wiſe huſband-men firſt caſt out weeds and noxious plants, then ſow the good ſeed, ſo muſic is uſed to compoſe the mind, and fit it for receiving inſtruction: for pleaſure, ſays he, is not the proper end of muſic, which affords recreation to the mind only by accident, the propoſed end being the inſtilling of virtue. Again, he ſays, if every city, and almoſt every nation loves decency and humanity, muſic cannot poſſibly be uſeleſs.

It was uſed at the feaſts of princes and heroes, ſays Athenæus, not out of levity and vain mirth; but rather as a kind of medicine, that by making their minds cheerful, it might help their digeſtion: There, ſays he, they ſung the praiſes of the Gods and heroes and other uſeful and inſtructive compoſures, that their minds might not be neglected while they took care of their bodies; and that from a reverence of the Gods, and by the example of good men, they might be kept within the bounds of ſobriety and moderation.

But we are not confined to the authority and opinion of philoſophers or any particular perſons; we have the teſtimony of whole nations where it had public encouragement, and was made neceſſary by the law; as in the moſt part of the Grecian common-wealths.

Athenæus aſſures us, That anciently all their laws divine and civil, exhortations to virtue, the knowledge of divine and human things, the lives and actions of illuſtrious men, and even hiſtories, and mentions Herodotus, were written in verſe and publicly ſung by a chorus, to the ſound of inſtruments; they found this by experience an effectual means to impreſs morality, and a right ſenſe of duty: Men were attentive to things

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that were propoſed to them in ſuch a ſweet and agreeable manner, and attracted by the charms of harmonious numbers, and well modulated ſounds; they took pleaſure in repeating theſe examples and inſtructions, and found them eaſier retained in their memories. Ariſtotle alſo in his problems tells us, That before the uſe of letters, their laws were ſung muſically, for the better retaining them in memory. We have a very old and remarkable proof of this virtue of muſic in the ſtory of Orpheus and Amphion, both of them poets and muſicians, who made a wonderful impreſſion upon a rude and uncultivated age, by their virtuous and wiſe inſtructions, inforced by the charms of poetry and muſic: The ſucceeding poets, who turned all things into myſtery and fable, feign the one to have drawn after him, and tamed the moſt ſavage beaſts; and the other to have animated the very trees and ſtones, by the power of muſic, Horace had received the ſame traditions of all the things I have now narrated, and with theſe mentions other uſes of muſic. The paſſage is in his book de arte Poetica, and is worth repeating.

Silveſtres homines, ſacer interpreſq; deorum,
Cædibus & victu fœdo, deterruit Orpheus:
Dictus ob hoc lenire tigres, rabidoſq; leones:
Dictus & Amphion, Thebanæ conditor arcis,
Saxa movere ſono teſtudinis, & prece blanda
Ducere quo vellet. Fuit hæc ſapientia quondam,
Publica privatis ſecernere, ſacra profanis:
Concubitu prohibere vago: dare ſacra maritis:
Oppida moliri: leges incidere ligno:
Sic honor, & nomen divinis vatibus, atque
Carminibus venit. Poſt hos inſignis Homerus,
Tyrtæuſq; *mares animos in martia bella*
Verſibus exacuit. Dictæ per carmina ſortes:
Et vitæ monſtrata via eſt: & gratia regum
Pieriis tentata modis: luduſq; repertus,
Et longorum operum finis: ne forte pudori,
Sit tibi muſa lyræ ſolers, et cantor Apollo.

From theſe experiences I ſay, the art was publicly honoured by the governments of Greece. It was by the law made a neceſſary part of the education of youth. Plato aſſures us it was thus at Athens; in his firſt Alcibiades

cibiades, he mentions to that great man, in Socrates's name, how he was taught to read and write, to play on the harp, and wreſtle. And in his Crito, he ſays, did not the laws moſt reaſonably appoint that your father ſhould educate you in muſic and gymnaſtic? And we find theſe three, grammar, muſic and gymnaſtic, generally named together, as the known and neceſſary parts of the education of youth, eſpecially of the better ſort: Plutarch and Athenæus give abundant teſtimony to this; and Terence having laid the ſcene of his plays in Greece, or rather only tranſlated, and at moſt but imitated Menander, gives us another proof, in the Act 3. Scene 2. of his Eunuch. Fac periculum in literis, fac in palæſtra, in muſicis. Quæ liberum ſcire æquum eſt adoleſcentem ſolertem dabo.

The uſe of muſic in the Temples and ſolemn ſervice of their Gods is paſt all queſtion. Plato in his Dialogues concerning the laws, gives this account of the ſacred muſic. That every ſong conſiſt of pious words. That we pray to God to whom we ſacrifice. That the poets, who know that prayers are petitions or requeſts to the Gods, take good heed they don't aſk ill inſtead of good, and do nothing but what's juſt, honeſt, good and agreeable to the laws of the ſociety; and that they ſhew not their compoſitions to any private perſon, before thoſe have ſeen and approved them who are appointed judges of theſe things, and keepers of the laws: then, hymns to the praiſes of the Gods are to be ſung, which are very well connected with prayer; and after the Gods, prayers and praiſes are to be offered to the dæmons and heroes.

As they had poetical compoſitions upon various ſubjects for their public ſolemnities, ſo they had certain determinate modes both in the harmonia and rythmus, which it was unlawful to alter; and which were hence called nomi or laws, and muſica canonica. They were jealous of any innovations in this matter, fearful that a liberty being allowed, it might be abuſed to luxury; for they believed there was a natural connection between the public manners and muſic: Plato denied that the muſical modes or laws could be changed without a change of the public laws; he meant, the influence of muſic was ſo great, that the changes in it would neceſ-

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ſarily produce a proportional change of manners and the public conſtitution.

The uſe of it in war will eaſily be allowed to have been by public authority; and the thing we ought to remark is, that it was not uſed as a mere ſignal, but for inſpiring courage, raiſing their minds to the ambition of great actions, and freeing them from baſe and cowardly fear; and this was not done without great art, as Virgil ſhews when he ſpeaks of Miſenus,

—Quo non præſtantior alter,
Ære ciere viros, martemque accendere cantu.

From Athens let us come to Lacedemon, and here we find it in equal honour. Their opinion of its natural influence was the ſame with that of their neighbours: and to ſhew what care was taken by the law, to prevent the abuſe of it to luxury, the hiſtorians tell us that Timotheus was fined for having more than ſeven ſtrings on his lyre, and what were added ordered to be taken away. The Spartans were a warlike people, yet very ſenſible of the advantage of fighting with a cool and deliberate courage; therefore as Gellius out of Thucydides reports, they uſed not in their armies, inſtruments of a more vehement ſound, that might inflame their temper and make them more furious, as the tuba, cornu and lituus, but the more gentle and moderate ſounds and modulations of the tibia, that their minds being more compoſed, they might engage with a rational courage. And Gellius tells us, the Cretans uſed the Cithara to the ſame purpoſe in their armies. We have already heard how this people entertained at great expence the famous Thales to inſtruct their youth in muſic; and after their muſic had been thrice corrupted, thrice they reſtored it.

If we go to Thebes, Epaminondas will be a witneſs of the eſteem it was in, as Corn. Nepos informs us.

Athenæus reports, upon the authority of Theopompus, that the Getan ambaſſadors, being ſent upon an embaſſy of peace, made their entry with lyres in their hands, ſinging and playing to compoſe their minds, and make themſelves maſters of their temper. We need

need not then doubt of its public encouragement among this people.

But the moſt famous inſtance in all Greece, is that of the Arcadians, a people, ſays Polybius, in reputation for virtue among the Greeks; eſpecially for their devotion to the Gods. Muſic, ſays he, is eſteemed every where, but to the Arcadians it is neceſſary, and allowed a part in the eſtabliſhment of their ſtate, and an indiſpenſable part of the education of their children. And tho' they might be ignorant of other arts and ſciences without reproach, yet none might preſume to want knowledge in muſic, the law of the land making it neceſſary; and inſufficiency in it was reckoned infamous among that people. It was not thus eſtabliſhed, ſays he, ſo much for luxury and delight, as from a wiſe conſideration of their toilſome and induſtrious life, owing to the cold and melancholy air of their climate; which made them attempt every thing for ſoftning and ſweetning thoſe auſterities they were condemned to. And the neglect of this diſcipline he gives as the reaſon of the barbarity of the Cynæthians, a people of Arcadia.

We ſhall next conſider the ſtate of muſic among the ancient Romans. Till luxury and pride ruin'd the Manners of this brave nation, they were famous for a ſevere and exact virtue. And tho' they were convinced of the native charms and force of muſic, yet we don't find they cheriſhed it to the ſame degree as the Greeks; from which one would be tempted to think they were only afraid of its power, and the ill uſe it was capable of: A caution that very well became thoſe who valued themſelves ſo much, and juſtly, upon their piety and good manners.

Corn. Nepos, in his preface, takes notice of the differences between the Greek and Roman cuſtoms, particularly with reſpect to muſic; and in the life of Epaminondas, he has theſe words, Scimus enim muſicum noſtris moribus abeſſe a principis perſona; ſaltare etiam in vitiis poni, quæ omnia apud Græcos & gratia & laude digna ducuntur.

Cicero in the beginning of the firſt book of his Tuſculan Queſtions, tells us, that the old Romans did not ſtudy the more ſoft and polite arts ſo much as the

Greeks; being more addicted to the ſtudy of morality and government: hence muſic had a fate ſomewhat different at Rome.

But the ſame Cicero ſhews us plainly his own opinion of it. Lib. 2. de Legibus; Aſſentior enim Platoni, nihil tam facile in animos teneros atque molles influere quam varios canendi ſonos. Quorum dici vix poteſt quanta ſit vis in utramque partem, namque & incitat languentes, & languefacit incitatos, et tum remittit animos, tum contrahit. Certainly he had been a witneſs to this power of ſound, before he could ſpeak ſo; and I ſhall not believe he had met with the experiment only at Athens. A man ſo famous for his eloquence, muſt have known the force of harmonious numbers, and well proportioned tones of the voice.

Quintilian ſpeaks honourably of muſic. He ſays, Lib. 1. Chap. 11. Nature ſeems to have given us this gift for mitigating the pains of life, as the common practice of all labouring men teſtifies. He makes it neceſſary to his orator, becauſe, ſays he, Lib. 8. Chap. 4. It is impoſſible that a thing ſhould reach the heart which begins with choking the ear; and becauſe we are naturally pleaſed with harmony, otherwiſe Inſtruments of muſic that cannot expreſs words would not make ſuch ſurpriſing and various effects upon us. And in another place, where he is proving art to be only nature perfected, he ſays, muſic would not otherwiſe be an art, for there is no nation which has not its ſongs and dances.

Some of the firſt rank at Rome practiſed it. Athenæus ſays of one Maſurius, a lawyer, whom he calls one of the beſt and wiſeſt of men, and inferior to none in the law, that he applied himſelf to muſic diligently. And Plutarch places muſic, viz. ſinging and playing on the lyre, among the qualifications of Metella, the daughter of Scipio Metellus.

Macrobius in the 10 Chap. Lib. 2. of his Saturnalia ſhews us, that neither ſinging nor dancing were reckoned diſhonourable exerciſes even for the quality among the ancient Romans; particularly in the times between the two Punick wars, when their virtue and manners were at the beſt; provided they were not ſtudied with too much curioſity, and too much time

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ſpent about them; and obſerves, that it is this, and not ſimply the uſe of theſe, that Saluſt complains of in Sempronia, when he ſays ſhe knew pſallere & ſaltare elegantius quam neceſſe erat probæ. What an opinion Macrobius himſelf had of muſic we have in part ſhewn already; to which let us add here this remarkable paſſage in the place formerly cited. Ita denique omnis habitus animæ cantibus gubernatur, ut & ad bellum progreſſui & etiam receptui canatur, cantu & excitante & rurſus ſedante virtutem; dat ſomnos adimitque necnon curas & immittit & retrahit, iram ſuggerit, clementiam ſuadet, corporum quoque morbis medetur. Hinc eſt quod ægris remedia præſtantes præcinere dicuntur. The abuſe of it, which 'tis probable lay chiefly in their idle, ridiculous, and laſcivious dancing, or perhaps their ſpending too much time even in the moſt innocent part of it, and not applying it to the true ends, made the wiſer ſort cry out, and brought the character of a muſician into ſome diſcredit. But we find, that the true and proper muſic was ſtill in honour and practiſe among them: had Rome ever ſuch poets, or were they ever ſo honoured as in Auguſtus's reign? Horace, tho' he complains of the abuſe of the theatre, and the muſic of it, yet in many places he ſhews us, that it was then the practiſe to ſing verſes or odes to the ſound of the lyre, or of pipes, or of both together; Lib. 4. Ode 9. Verba loquor ſocianda chordis. Lib. 2. Ep. 2. Hic ego verba lyræ motura ſonum connectere digner? In the firſt Ode, Lib. 1. he gives us his own character as a poet and muſician, Si neque tibias Euterpe cohibet, &c. He ſhews us, that it was in his time uſed both publicly in the praiſe of the gods and men, and privately for recreation, and at the tables of the great, as we find clearly in theſe paſſages. Lib. 4. Ode 11. Condiſce modos amanda voce quos reddas, minuentur atræ carmine curæ. Lib. 3. Ode 28. Nos cantabimus invicem Neptunum, tu curva recines lyra Latonam, &c. Lib. 4. Ode 15. Nofque & profeſtis lucibus & ſacris-Rite Deos prius adprecati, virtute functos more patrum duces, Lydis remiſto carmine tibiis Trojamque, &c. canemus. Epode 9. Quando repoſtum cæcubum ad feſtas dapes tecum,—Beate Mecænas bibam? Sonante miſtis tibiis

carmen lyra. Lib. 3. Ode 11. Tuque teſtudo—Nunc & divitum menſis & amica templis.

For all the abuſes of it, there were ſtill ſome, even of the beſt characters, that knew how to make an innocent uſe of it: Sueton in Titus's life, whom he calls Amor ac deliciæ generis humani, among his other accompliſhments adds, Sed ne Muſicæ quidem rudis, ut qui cantaret & pſalleret jucunde ſcienterque.

There is enough ſaid to ſhew the real value and uſe of muſic among the ancients. I believe it will be needleſs to inſiſt much upon our own experience; I ſhall only ſay, theſe powers of muſic remain to this day, and are as univerſal as ever. We uſe it ſtill in war and in ſacred things, with advantages that they only know who have the experience. But in common life, almoſt every body is a witneſs of its ſweet influences.

What a powerful impreſſion muſical ſounds make even upon the brute animals, eſpecially the feathered kind, we are not without ſome inſtances. But how ſurpriſing are the accounts we meet with among the old writers? I have reſerved no place for them here. You may ſee a variety of ſtories in Ælian's Hiſtory of Animals, Strabo, Pliny, Marcianus Capella, and others.

Before I leave this, I muſt take notice of ſome of the extraordinary effects aſcribed to muſic. Pythagoras is ſaid to have had an abſolute command of the human paſſions, to turn them as he pleaſed by muſic: they tell us, that meeting a young man who in great fury was running to burn his rival's houſe, Pythagoras allayed his temper, and diverted the deſign, by the ſole power of muſic. The ſtory is famous how Timotheus, by a certain ſtrain or modulation, fired Alexander's temper to that degree, that forgetting himſelf, in a warlike rage, he killed one of the company, and by a change of the muſic was ſoftned again, even to a bitter repentance of what he had done. But Plutarch ſpeaks of one Antigenides, a Tibicen or piper, who by ſome warlike ſtrain had tranſported that hero ſo far, that he fell upon ſome of the company. Terpander quelled a Sedition at Sparta by means of muſic. Thales being called from Crete, by advice of the oracle,

to

to Sparta, cured a raging peſtilence by the ſame means. The cure of diſeaſes by muſic is talked of with enough of confidence. Aulus Gellius, Lib. 4. Chap. 13, tells us, it was a common tradition, that thoſe who were troubled with the Sciatica (he calls them Iſchiaci) when their pain was moſt exquiſite, were eaſed by certain gentle modulations of muſic performed upon the Tibiæ; and ſays, he had read in Theophraſtus, that by certain artful modulations of the ſame kind of inſtrument, the bites of ſerpents or vipers had been cured. Clytemneſtra had her vicious inclinations to unchaſtity corrected by the applications of muſicians. And a virtuous woman is ſaid to have diverted the wicked deſign of two rakes that aſſaulted her, by ordering a piece of muſic to be performed in the Spondean mode.

A ſhort HISTORY of the IMPROVEMENTS in MUSIC.

FOR what reaſons the Greek muſicians made ſuch a difficult matter of their notes and ſigns we cannot gueſs, unleſs they did it deſignedly to make their art myſterious, which is an odious ſuppoſition; but one can ſcarcely think it was otherwiſe, who conſiders how obvious it was to find a more eaſy method. This was therefore the firſt thing the Latins corrected in the Greek muſic, as we have already heard was done by Boethius, and further improved by Gregory the Great.

The next ſtep in this improvement is commonly aſcribed to Guido Aretinus, a Benedictin monk, of Aretium in Tuſcany, who, about the year 1024, (tho' there are ſome differences about the year) contrived the uſe of a ſtave of 5 lines, upon which, with its ſpaces he marked his notes, by ſetting points (.) up and down upon them, to denote the riſe and fall of the voice, (but as yet there were no different marks of time;) he marked each line and ſpace at the beginning of the ſtave, with Gregory's 7 letters, and when he ſpake of the notes

notes, he named them by theſe inſtead of the long Greek names of Proſlambanomenos, &c. The Correſpondence of theſe letters to the names of the chords in the Greek ſyſtem being ſettled, the degrees and intervals between any line or ſpace, and any other were hereby underſtood. But this artifice of points and lines was uſed before his time, by whom invented is not known; and this we learn from Kircher, who ſays he found in the Jeſuits library at Meſſina a Greek manuſcript book of hymns, more than 700 years old; in which ſome hymns were written on a ſtave of 8 lines, marked at the beginning with 8 Greek letters; the notes or points were ſet upon the lines, but no uſe made of the ſpaces: Vincenzo Galileo confirms us alſo in this. But whether Guido knew this, is a queſtion; and tho' he did, yet it was well contrived to uſe the ſpaces and lines both, by which the notes lye nearer each other, fewer lines are needful for any interval, and the diſtances of notes are eaſier reckoned.

But there is yet more of Guido's contrivance, which deſerves to be conſidered; Firſt, He contrived the 6 muſical ſyllables, ut, re, mi, fa, ſol, la, which he took out of this latin hymn.

UT queant laxis RE ſonare fibris
MIra geſtorum FAmuli tuorum,
SOLve polluti LAbii reatum,
O pater alme.

In repeating this it came into his mind, by a kind of divine inſtinct ſays Kircher, to apply theſe ſyllables to his notes of muſic: a wonderful contrivance certainly for a divine inſtinct! But let us ſee where the excellency of it lies: Kircher ſays, by them alone he unfolded all the nature of muſic, diſtinguiſhed the tones (or modes) and the ſeats of the ſemitones. Elſewhere he ſays, That by the application of theſe ſyllables he cultivated muſic, and made it fitter for ſinging. In order to know how he applied them, there is another piece of the hiſtory we muſt take along, viz. That finding the Greek Diagram of too ſmall extent, he added 5 more chords or notes in this manner; having applied the letter A to the Proſlambanomenos,

and

and the reſt in order to Nete Hyperbolæon, he added a chord, a Tonus below Proſlam. and called it Hypoproſlambanomenos, and after the Latins g. but commonly marked with the Greek Γ; to ſhew by this, ſome ſay, that the Greeks were the inventors of muſic; but others ſay, he meant to record himſelf (that letter being the firſt in his name) as the improver of muſic; hence the Scale came to be called the Gamm. Above Nete Hyperbolæon he added other 4 chords, which made a new disjunct Tetrachord, he called Hyperhyperbolæon; ſo that his whole Scale contained 20 diatonic notes, (for this was the only Genus now uſed) beſides the b flat, which correſponded to the Trite Synemmenon of the ancients, and made what was afterwards called the ſeries of b molle, as we ſhall hear.

Now the application of theſe ſyllables to the Scale was made thus: Between mi and fa is a ſemitone; ut: re, re: mi, fa: ſol, and ſol: la are tones (without diſtinguiſhing greater and leſſer;) then becauſe there are but 6 ſyllables, and 7 different notes or letters in the 8ve; therefore, to make mi and fa fall upon the true places of the natural ſemitones, ut was applied to different letters, and the reſt of the 6 in order to the others above; the letters to which ut was applied are g. c. f. according to which he diſtinguiſhed three ſeries, viz. that which began with ut in g, and he called it the ſeries of b durum, becauſe b was a whole tone above a; that which began with ut in c was the ſeries of b natural, the ſame as the former; and when ut was in f, it was called b molle, wherein b was only a ſemitone above a. See the whole ſcale in the following ſcheme,

GUIDO's

GUIDO's SCALE.

	B.dur	*natu.*	*molle*
e e	*la*	*mi*	
d d	*ſol*	*re*	*la*
c c	*fa*	*ut*	*ſol*
b b	*mi*		
b♭			*fa*
a a	*re*	*la*	*mi*
g	*ut*	*ſol*	*re*
f		*fa*	*ut*
e	*la*	*mi*	
d	*ſol*	*re*	*la*
c	*fa*	*ut*	*ſol*
b	*mi*		
b			*fa*
a	*re*	*la*	*mi*
G	*ut*	*ſol*	*re*
F		*fa*	*ut*
E	*la*	*mi*	
D	*ſol*	*re*	
C	*fa*	*ut*	
B	*mi*		
A	*re*		
Γ*amm*	*ut*		

where obſerve, the ſeries of b natural ſtands between the other two, and communicates with both; ſo that to name the chords of the ſcale by theſe ſyllables, if we would have the ſemitones in their natural places, viz. b . c, and e . f, then we apply ut to g, and after la, we go into the ſeries of b natural at fa, and after la of this, we return to the former at mi, and ſo on; or we may begin at ut in c, and paſs into the firſt ſeries at mi, and then back to the other at fa: by which means the one tranſition is a ſemitone, viz. la . fa, and the other a tone la : mi. To follow the order of b molle, we may begin with ut in c or f, and make tranſitions the ſame way as formerly: hence came the barbarous names of Gammut, Are, Bmi, &c. with which the memories of learners uſed to be oppreſſed. But now what a perplexed work is here, with ſo many different ſyllables applied to every chord, and all for no other purpoſe but marking the places of the ſemitones, which the ſimple letters a : b . c, &c. do as well, and with infinite more eaſe. Afterwards ſome contrived better, by making ſeven ſyllables, adding Si in the blanks you ſee in the ſeries between la and ut, ſo that mi-fa and ſi-ut are the two natural ſemitones: Theſe 7 completing the 8ve, they took away the middle ſeries as of no uſe, and ſo ut being in g or f, made the ſeries of B durum (or natural, which is all one) and B molle. But the Engliſh throw out both ut and ſi, and make the other 5 ſerve for all. This wonderful contrivance of Guido's ſix ſyllables, is what

what a very ingenious man thought fit to call Crux tenellorum ingeniorum; but he might have ſaid it of any of the Methods; for which reaſon, I believe, they are laid aſide with very many, and, I am ſure, ought to be ſo with every body.

But to go on with Guido; the letters he applied to his lines and ſpaces, were called keys, and at firſt he marked every line and ſpace at the beginning of a ſtave with its letter; afterwards marked only the lines, as ſome old examples ſhew; and at laſt marked only one, which was therefore called the ſigned Clef; of which he diſtinguiſhed three different ones, g, c, f; (the three letters he had placed his ut in) and the reaſon of this leads us to another article of the hiſtory, viz. That Guido was the inventor of Symphonetic compoſition, (for if the ancients had it, it was loſt; but this ſhall be conſidered again) the firſt who joined in one harmony ſeveral diſtinct melodies, and brought it even the length of 4 parts, viz. Baſs, Tenor, Counter, and Treble; and therefore to determine the places of the ſeveral Parts in the general ſyſtem, and their relations to one another, it was neceſſary to have 3 different ſigned Clefs.

He is alſo ſaid to be the contriver of thoſe inſtruments they call Polyplectra, as ſpinets and harpſichords: however they may now differ in ſhape, he contrived what is called the Abacus and the Palmulæ, that is, the Machinery by which the ſtring is ſtruck with a Plectrum made of quills Thus far go the improvements of Guido Aretinus, and what is called the Guidonian Syſtem; to explain which he wrote a book he calls his Micrologum.

The next conſiderable improvement was about 300 years after Guido, relating to the Rythmus, and the marks by which the duration of every note was known; for hitherto they had but imitated the ſimplicity of the ancients, and barely followed the quantity of the ſyllables, or perhaps not ſo accurate in that, made all their notes of equal duration, as ſome of the old Eccleſiaſtic muſic is an inſtance of. To produce all the effects muſic is capable of, the neceſſity of notes of different quantity was very obvious; for the Rythmus is the ſoul of muſic; and becauſe the natural quantity

of the ſyllables was not thought ſufficient for all the variety of movements, which we know to be ſo agreeable in muſic, therefore about the year 1330 or 1333, ſays Kircher, the famous Joannes de Muris, Doctor at Paris, invented the different figures of notes, which expreſs the time, or length of every note, at leaſt their true relative proportions to one another. Anciently they were called, Maxima, Longa, Brevis, Semibrevis, Minima, Semiminima, Chroma, (or Fuſa) Semichroma. What we call the Demiſemiquaver is of modern addition. But whether all theſe were invented at once is not certain, nor is it probable they were; at firſt 'tis like they uſed only the Longa and Brevis, and the reſt were added by degrees. Now alſo was invented the diviſion of every ſong in ſeparate and diſtinct bars or meaſures. Then for the proportion of theſe notes one to another it was not always the ſame; ſo a Long was in ſome caſes equal to two Breves, ſometimes to three, and ſo of others; and this difference was marked generally at the beginning; and ſometimes by the poſition or way of joining them together in the middle of the ſong; but this variety happened only to the firſt four. Again, reſpecting the mutual proportions of the notes, they had what they called Modes, Prolations and Times: The two laſt were diſtinguiſhed into Perfect and Imperfect; and the firſt into greater and leſſer, and each of theſe into perfect and imperfect: but afterwards they reduced all into 4 modes including the Prolations and Times. I could not think it worth pains to make a tedious deſcription of all theſe, with their marks or ſigns, which you may ſee in the already mentioned Dictionaire de Muſique: I ſhall only obſerve here, That as we now make little uſe of any note above the Semibreve, becauſe indeed the remaining 6 are ſufficient for all purpoſes, ſo we have caſt off that difficulty of various and changeable proportions between the ſame notes: the proportions of 3 to 1 and 2 to 1 was all they wanted, and how much more eaſy and ſimple is it to have one proportion fixt, viz. 2 : 1 (i. e. a Large equal to two Longs, and ſo on in order) and if the proportion of 3 : 1 between two ſucceſſive notes is required, this is, without any manner of confuſion or difficulty, expreſſed by annexing a point (.)

on

on the right hand of the greateſt of the two notes, as has been above explained; ſo that 'tis almoſt a wonder how the elements of muſic were ſo long involved in theſe perplexities, when a far eaſier way of coming to the ſame end was not very hard to find.

We ſhall obſerve here too, That till theſe notes of various Time were invented, inſtrumental performances without ſong muſt have been very imperfect if they had any; and what a wonderful variety of entertainments we have by this kind of compoſition, I need not tell you.

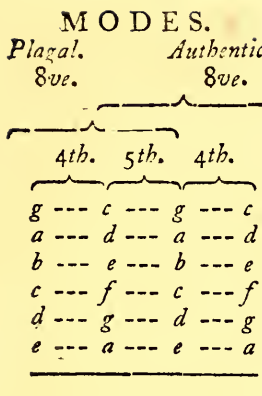
There remain two other very conſiderable ſteps, before we come to the preſent ſtate of the ſcale of muſic. Guido firſt contrived the joining different parts in one concert, as has been ſaid, yet he carried his ſyſtem no further than 20 diatonic notes: now for the more ſimple and plain compoſitions of the Eccleſiaſtic ſtile, which is probable was the moſt conſiderable application he made of muſic, this extent would afford no little variety; but experience has ſince found it neceſſary to enlarge the ſyſtem even to 36 diatonic notes, which are repreſented in the foremoſt range of keys on the breaſt of a harpſichord; for ſo many are required to produce all that admirable variety of harmony, which the parts in modern compoſitions conſiſt of, according to the many different ſtiles practiſed: but a more conſiderable defect of his ſyſtem is, That except the tone between a and b, which is divided into two ſemitones by ♭ (flat) there was not another tone in all the ſcale divided; and without this the ſyſtem is very imperfect with reſpect to fixed ſounds, becauſe without theſe there can be no right modulation or change from key to key. Therefore the modern ſyſtem has in every 8ve 5 artificial chords or notes, which we mark by the letters of the natural chords, with the diſtinction of 𝄪 or ♭. Obſerve, That by theſe additional chords, we have the diatonic and chromatic Genera of the ancients mixed; ſo that compoſitions may be made in either kind, tho' we reckon the diatonic the true natural ſpecies; and if at any time, two ſemitones are placed immediately in ſucceſſion: for example, if we ſing c . c𝄪 . d, which is done for variety, tho' ſeldom, ſo far this is a mixture of the chromatic; but then to make it pure chromatic, no

ſmaller interval can be ſung after two ſemitones aſcending than a Triemitone, nor deſcending leſs than a Tone; becauſe in the pure chromatic ſcale the Spiſſum has always above it a Triemitone, and below it either a Triemitone or a Tone.

The laſt thing I ſhall conſider here is, how the modes were defined in theſe days of improvement; and I find they were generally characteriſed by the ſpecies of 8ve after Ptolomy's manner, and therefore reckoned in all 7. But afterwards they conſidered the harmonical and arithmetical diviſions of the 8ve, whereby it reſolves into a 4th above a 5th, or a 5th above a 4th. And from this they conſtituted 12 modes, making of each 8ve two different modes according to this different diviſion; but becauſe there are two of them that cannot be divided both ways, therefore there are but 12 modes. To be more particular, conſider, in the natural ſyſtem there are 7 different octaves proceeding from theſe 7 letters, a, b, c, d, e, f, g; each of which has two middle chords, which divide it harmonically and arithmetically, except f, which has not a true 4th, (becauſe b is three tones above it, and a 4th is but two tones and a ſemitone) and b, which conſequently wants the true 5th (becauſe f is only two tones and two ſemitones above it, and a true 5th contains three tones and a ſemitone) therefore we have only 5 octaves that are divided both ways, viz. a, c, d, e, g, which makes 10 modes according to theſe different diviſions, and the other two f and b make up the 12. Theſe that are divided harmonically, i. e. with the 5ths loweſt were called authentic, and the other plagal modes. See the following ſcheme.

To theſe modes they gave the names of the ancient Greek tones, as Dorian, Phrygian: but ſeveral authors differ in the application of theſe names, as they do about the order, as, which they ſhall call the firſt and ſecond, &c. which being arbitrary things, as far as I can underſtand, it were as idle to pretend to reconcile

MODES.



them, as it was in them to differ about it. The material point is, if we can find it, to know what they meant by theſe diſtinctions, and what was the real uſe of them in muſic; but even here where they ought to have agreed, we find they differed. The beſt account to be given of it is this: They conſidered that an 8ve which wants a 4th or 5th, is imperfect; theſe being the concords next to 8ve, the ſong ought to touch theſe chords moſt frequently and remarkably; and becauſe their concord is different, which makes the melody different, they eſtabliſhed by this two modes in every natural octave, that had a true 4th and 5th: then if the ſong was carried as far as the octave above, it was called a perfect mode; if leſs, as to the 4th or 5th, it was imperfect; if it moved both above and below, it was called a mixt mode: thus ſome authors ſpeak about theſe modes. Others conſidering how indiſpenſable a chord the 5th is in every mode, they took for the final or key-note in the arithmetically divided octaves, not the loweſt chord of that octave, but that very 4th; for example, the octave g is arithmetically divided thus, g - c - g, c is a 4th above the lower g, and a 5th below the upper g, this c therefore they made the final chord of the mode, which therefore properly ſpeaking is c and not g; the only difference then in this method, between the authentic and plagal modes is, that the authentic goes above its final to the octave, the other aſcends a 5th, and deſcends a 4th, which will indeed be attended with different effects, but the mode is eſſentially the ſame, having the ſame final to which all the notes refer. We muſt next conſider wherein the modes of one ſpecies, as authentic or plagal, differ among themſelves: This is either by their ſtanding higher or lower in the ſcale, i. e. the different tenſion of the whole octave; or rather the different Subdiviſion of the octave into its concinnous degrees; there is not another. Let us conſider then whether

whether theſe differences are ſufficient to produce ſo very different effects, as have been aſcribed to them, for example, one is ſaid to be proper for mirth, another for ſadneſs, a third proper to religion, another for tender and amorous ſubjects, and ſo on: whether we are to aſcribe ſuch effects merely to the conſtitution of the octave, without regard to other differences and ingredients in the compoſition of melody, I doubt any body now a days will be abſurd enough to affirm; theſe have their proper differences, 'tis true, but which have ſo little influence, that by the various combinations of other cauſes, one of theſe modes may be uſed to different purpoſes. The greateſt and moſt influencing difference is that of theſe octaves, which have the 3d l. or 3d g. making what is above called the ſharp and flat key: but we are to notice, that of all the 8ves, except c and a, none of them have all their eſſential chords in juſt proportion, unleſs we neglect the difference of tone greater and leſſer, and alſo allow the ſemitone to ſtand next the fundamental in ſome flat keys (which may be uſeful, and is ſometimes uſed;) and when that is done, the octaves that have a flat 3d will want the 6th g. and 7th g. which are very neceſſary on ſome occaſions; and therefore the artificial notes ※ and ♭ are of abſolute uſe to perfect the ſyſtem. Again, if the modes depend upon the ſpecies of 8ves, how can they be more than 7? And as to this diſtinction of authentic and plagal, I have ſhewn that it is imaginary, with reſpect to any eſſential difference conſtituted hereby in the kind of the melody; for tho' the carrying the ſong above or below the final, may have a different effect, yet this is to be numbered among the other cauſes, and not aſcribed to the conſtitution of the octaves. But 'tis particularly to be remarked, that theſe authors who give us examples in actual compoſition of their 12 modes, frequently take in the artificial notes ※ and ♭ to perfect the melody of their key; and by this means depart from the conſtitution of the 8ve, as it ſtands in the fixt natural ſyſtem. So we can find little certain and conſiſtent in their way of ſpeaking about theſe things; and their modes are all reducible to two, viz. the ſharp and flat; other differences reſpecting only the place of the ſcale where the

the fundamental is taken: I conclude therefore that the true theory of modes, is where they are diſtinguiſhed into two ſpecies, ſharp and flat, whoſe effects muſt be allowed are different; but other cauſes muſt concur to any remarkable effect; and therefore 'tis unreaſonable to talk as if all were owing to any one thing. What they called the ſeries of b molle, was no more than this, That becauſe the 8ve f had a 4th above at b, exceſſive by a ſemitone, and conſequently the 8ve b had a 5th above as much deficient, therefore this artificial note b flat or ♭, ſerved them to tranſpoſe their modes to the diſtance of a 4th or 5th, above or below; for taking ♭ a ſemitone above a, the reſt keeping their ratios already fixt, the ſeries proceeding from c with b natural (i. e. a tone above a) is in the ſame order of degrees, as that from f with b flat (i. e. ♭ a ſemitone above a;) but f is a 4th above c, or a 5th below; therefore to tranſpoſe from the ſeries of b natural to b molle we aſcend a 4th or deſcend a 5th; and contrarily from b molle to the other: This is the whole myſtery; but they never ſpeak of the other tranſpoſitions that may be made by other artificial notes.

You may alſo obſerve, that what they called the eccleſiaſtic tones, are no other than certain notes in the organ which are made the final or fundamental of the hymns; and as modes they differ, ſome by their place in the ſcale, others by the ſharp and flat 3d; but even here every author ſpeaks not the ſame way: 'tis enough we know they can differ no other way, or at leaſt all their differences can be reduced to theſe. At firſt they were four in number, whoſe finals were d, e, f, g, conſtituted authentically: this choice, we are told, was firſt made by St. Ambroſe, biſhop of Milan; and for being thus choſen and approved, they pretend the name authentic was added: afterwards Gregory the Great added four plagals, a, b, c, d, whoſe finals are the very ſame with the firſt four, and in effect are only a continuation of theſe to the 4th below; and for this connection with them were called plagal, tho' the derivation of the word is not ſo plain.

The

The Ancient and Modern Muſic compared.

THE laſt age was famous for the war that was raiſed, and eagerly maintained by two different parties, concerning the ancient and modern genius and learning. Among the diſputed points muſic was one. I know of nothing new to be advanced on either ſide.

The queſtion in general is, Whether the ancients or the moderns beſt underſtood and practiſed muſic? Some affirm, that the ancient art of muſic is quite loſt, among other valuable things of antiquity, vid. Pancirollus, de Muſica. Others pretend, That the true ſcience of harmony is arrived to much greater perfection than what was known or practiſed among the ancients. The fault with many of the contenders on this point is, that they fight at long weapons; I mean they keep the argument in generals, by which they make little more of it than ſome innocent harangues and flouriſhes of rhetorick, or at moſt make bold aſſertions upon the authority of ſome miſapplied expreſſions and incredible ſtories of ancient writers, for I am now ſpeaking chiefly of the patrons of the ancient muſic.

If Sir William Temple was indeed ſerious, and had any thing elſe in his view, but to ſhew how he could declaim, he is a notable inſtance of this. Says he, "What are become of the charms of muſic, by which "men and beaſts were ſo frequently inchanted, and "their very natures changed; by which the paſſions "of men were raiſed to the greateſt height and vio-"lence, and then as ſuddenly appeaſed, ſo as they "might be juſtly ſaid, to be turned into lions or lambs, "into wolves or into harts, by the power and charms "of this admirable art?" And he might have added too, by which the trees and ſtones were animated; in ſpite of the ſenſe which Horace puts upon the ſtories of Orpheus and Amphion. But this queſtion ſhall be conſidered preſently. Again he ſays. "'Tis agreed "by the learned, that the ſcience of muſic, ſo admired "of the ancients, is wholly loſt in the world, and "that what we have now, is made up out of certain "notes that fell into the fancy or obſervation of a "poor fryar, in chanting his mattins. So that thoſe

"two

" two divine excellencies of muſic and poetry, are " grown in a manner, but the one fiddling and the " other rhyming, and are indeed very worthy the ig- " norance of the friar, and the barbarouſneſs of the " Goths that introduced them among us " Some learned men indeed have ſaid ſo; but as learned have ſaid otherwiſe: And for the deſcription Sir William gives of the modern muſic, it is the pooreſt thing ever was ſaid, and demonſtrates the author's utter ignorance of muſic: Did he know what uſe Guido made of theſe notes? He means the ſyllables, ut, re, mi, &c. for theſe are the notes he invented. If the modern muſic falls ſhort of the ancient, it muſt be in the uſe and application; for the materials and principles of harmony are the ſame thing, or rather they are improved; for Guido's ſcale to which he applied theſe ſyllables, is the ancient Greek ſcale only carried to a greater extent; and which is much improved ſince.

As I have ſtated the queſtion, we are firſt to compare the principles and then the practice.

Meibomius, no enemy to the ancient cauſe, ſpeaking of Ariſtides, calls him, Incomparabilis antiquæ muſicæ Auctor, & vere exemplar unicum, who, he ſays, has taught and explained all that was ever known or taught before him, in all the parts. We have Ariſtoxenus; and for what was written before him, he affirms to have been very deficient: nor do the later writers ever complain of the loſs of any valuable author that was before them.

Now we may ſuppoſe it will be manifeſt to the unprejudiced, who conſider what has been explained both of the ancient and modern principles and theory of harmonics, that they have not known more of it than we do, plainly becauſe we know all theirs; and that we have improved upon their foundation, will be as plain, from the accounts I have given of both, and the compariſon I have drawn all along in explaining the ancient theory; therefore I need inſiſt no more upon this part. The great diſpute is about the practice.

To underſtand the ancient practice of muſic, we are firſt to conſider what the name ſignified with them. Muſic included theſe three things, harmony, rythmus, and verſe: if there needs any thing to be added, take

theſe few authorities. In Plato's firſt Alcibiades, Socrates aſks what he calls that art which teaches to ſing, play on the harp, and dance? and makes him anſwer, Muſic: But ſinging among them was never without verſe. This is again confirmed by Plutarch, who ſays, "That in judging of the parts of muſic, reaſon and "ſenſe muſt be employed: for theſe three muſt al-"ways meet in our hearing, viz. Sound, whereby we "perceive harmony; Time, whereby we perceive "Rythmus; and Letters or Syllables, by which we un-"derſtand what is ſaid." Therefore we reaſonably conclude, that their muſic conſiſted of verſes ſung by one or more voices, alternately, or in choirs; ſometimes with the ſound of inſtruments, and ſometimes by voices only; and whether they had any muſic without ſinging, ſhall again be conſidered.

Let us now conſider what idea their writers give us of the practical muſic. This we may expect, if 'tis to be found at all, from the authors who write ex profeſſo upon muſic, and pretend to explain it in all its parts. I have already ſhewn, that they make the muſical faculties (as they call them) theſe, viz. Melopœia, Rythmopœia, and Poeſis. For the firſt, to make the compariſon right, it ſhall be conſidered under theſe two heads, Melody and Symphony, and begin with the laſt. It has been obſerved, in explaining the principles of the ancient Melopœia, that it contains nothing but what relates to the conduct of a ſingle voice, or making what we call melody: there is not the leaſt word of the concert or harmony of parts; from which there is very great reaſon to conclude, that this was no part of the ancient practice, and is altogether a modern invention, and a noble one too; the firſt rudiments of which has been already ſaid we owe to that ſame poor fryar (as Sir William Temple calls him) Guido Aretinus. But that there be no difference about mere words, obſerve, that the queſtion is not, Whether the ancients ever joined more voices or inſtruments together in one Symphony; but, whether ſeveral voices were joined, ſo as each had a diſtinct and proper melody, which made among them a ſucceſ-

ſion

ſion of various Concords; and were not in every note Uniſons, or at the ſame diſtance from each other, as 8ves? which laſt will agree to the general ſignification of the word Symphonia; yet 'tis plain, that in ſuch caſes there is but one ſong, and all the voices perform the ſame individual melody; but when the parts differ, not by the tenſion of the whole, but by the different relations of the ſucceſſive notes, This is the modern art that requires ſo peculiar a genius, and good judgment, in which therefore 'tis ſo difficult to ſucceed well. The ancient harmonic writers, in their rules and explications of the Melopœia, ſpeak nothing of this art: They tell us, that the Melopœia is the art of making ſongs; or more generally, that it is the uſe of all the parts and principles that are the ſubjects of harmonical contemplation. Now is it at all probable, that ſo conſiderable an uſe of theſe principles was known among the ancients, and yet never once mentioned by thoſe who profeſſed to write of Muſic in all its parts? Shall we think theſe concealed it, becauſe they envied poſterity ſo valuable an art? Or, was it the difficulty of explaining it that made them ſilent? They might at leaſt have ſaid there was ſuch an art; the definition of it is eaſy enough: Is it like the reſt of their conduct to neglect any thing that might redound in any degree to their own praiſe and glory? Since we find no notice of this art under the Melopœia, it cannot be expected in any other part. If any body ſhould think to find it in the part that treats of ſyſtems, becauſe that expreſſes a compoſition of ſeveral things, they will be diſappointed: for theſe authors have conſidered ſyſtems only as greater intervals between whoſe extremes other notes are placed, dividing them into leſſer intervals, in ſuch a manner as a ſingle voice may paſs agreeably from the one extreme to the other. But in diſtinguiſhing ſyſtems, they tell us, ſome are conſonant, ſome diſſonant: Which names expreſſed the quality of theſe ſyſtems, viz. that of the firſt, the extremes are fit to be heard together, and the other not; and if they were not uſed in conſonance, may ſome ſay, theſe names are wrong applied: but tho'

they ſignified that quality, it will not prove they were uſed in conſonance, at leaſt in the modern way: Beſides, when they ſpeak plainly and expreſſly of their uſe in ſucceſſion or melody, they uſe the ſame names, to ſignify their agreement: And if they were uſed in conſonance in the manner deſcribed, why have we not at leaſt ſome general rules to guide us in the practice? Or rather, does not their ſilence in this, demonſtrate there was no ſuch practice? But tho' there is nothing to be found in thoſe who have written more fully and expreſſly on muſic, yet the advocates for the ancient muſic find demonſtration enough, they think, in ſome paſſages of authors that have given tranſient deſcriptions of muſic: but if theſe paſſages are capable of any other good ſenſe than they put upon them, the ſilence of the profeſſed writers on muſic will undoubtedly caſt the balance on that ſide. Ariſtotle in his Treatiſe concerning the World, anſwers that queſtion, If the world is made of contrary principles, how comes it that it is not long ago diſſolved? He ſhews, that the beauty and perfection of it conſiſts in the admirable mixture and temperament of different things; and among his illuſtrations brings in muſic thus, Muſic, by a mixture of acute and grave, alſo of long and ſhort ſounds of different voices, yields one abſolute or perfect concert. Again, explaining the harmony of the celeſtial motions, where each orb, ſays he, has its own proper motion, yet all tend to one harmonious end, as they alſo proceed from one principle, making a choir in the heavens by their concord, and he carries on the compariſon with muſic thus: As in a choir, after the Præcentor the whole choir ſings, compoſed ſometimes of men and women, who by the different acuteneſs and gravity of their voices, make one concinnous harmony.

Let Seneca appear next. Don't you ſee of how many voices the chorus conſiſts? yet they make but one ſound: in it ſome are acute, ſome grave, and ſome middle: women are joined with men, and whiſtles alſo put in among them: each ſingle voice is concealed, yet the whole is manifeſt.

Caſſiodorus

Caſſiodorus ſays, Symphony is an adjuſtment of a grave ſound to an acute, or an acute to a grave, making melody.

Now the moſt that can be made of theſe paſſages is, That the ancients uſed choirs of ſeveral voices differing in acuteneſs and gravity; which was never denied: but the whole of theſe definitions will be fully anſwered, ſuppoſing they ſung all the ſame part or ſong only in different tenſions, as 8ve in every note. And from what was premiſed, I think there is reaſon to believe this to be the only true meaning.

But there are other conſiderable things to be ſaid that will put this queſtion beyond all reaſonable doubt. The word harmonia ſignifies more generally the agreement of ſeveral things that make up one whole; but ſo do ſeveral ſounds in ſucceſſion make up one ſong, which is in a very proper ſenſe, a compoſition. And in this ſenſe we have in Plato and others ſeveral compariſons to the harmony of ſounds in muſic. But 'tis alſo uſed in the ſtrict ſenſe for conſonance, and ſo is equivalent to the word Symphonia. Now we ſhall make Ariſtotle clear his own meaning in the paſſages adduced: he uſes Symphonia to expreſs two kinds of conſonance; the one, which he calls by the general name Symphonia, is the conſonance of two voices that are in every note uniſon; and the other, which he calls Antiphonia, of two voices that are in every note 8ve: In his Problems, § 19. Prob. 16. He aſks why Symphonia is not as agreeable as Antiphonia; and anſwers, becauſe in Symphonia the one voice being altogether like or as one with the other, they eclipſe one another. The Symphoni here plainly muſt ſignify uniſons, and he explains it elſewhere by calling them Omophoni: and that the 8ve is the Antiphoni is plain, for it was a common name to 8ve; and Ariſtotle himſelf explains the Antiphoni by the voice of a boy and a man that are as Nete and Hypate, which were 8ve in Pythagoras's lyre. Again, I own he is not ſpeaking here of uniſon and 8ve ſimply conſidered, but as uſed in ſong; and tho' in modern Symphonies it is alſo true, that uniſon cannot be ſo frequently uſed with as good

effect

effect as 8ve, yet his meaning is plainly this, viz. that when two voices ſing together one ſong, 'tis more agreeable that they be 8ve than uniſon with one another, in every note: this I prove from the 17th Probl. in which he aſks why Diapente and Diateſſaron are never ſung as the Antiphoni? He anſwers, becauſe the Antiphoni, or ſounds of 8ve, are in a manner both the ſame and different voices; and by this likeneſs, where at the ſame time each keeps its own diſtinct character, we are better pleaſed: therefore he affirms, that the 8ve can only be ſung in Symphony. Now that by this he means ſuch a Symphony is certain, becauſe in modern counterpoint the 4th, and eſpecially the 5th, are indiſpenſable; and indeed the 5th with its two 3ds, are the life of the whole. Again, in Probl. 18. he aſks why the Diapaſon only is magadiſed? And anſwers, becauſe its terms are the only Antiphoni: now that this ſignifies a manner of ſinging, where the ſounds are in every note 8ve to one another, is plain, from this word magadiſed, taken from the name of an inſtrument, in which two ſtrings were always ſtruck together for one note. Athenæus makes the Magadis the ſame with the Barbiton and Pectis; and Horace makes the muſe Polyhymnia the inventor of the Barbiton.—Nec Polyhymnia Leſboum refugit tendere Barbiton.—And from the nature of this inſtrument, that it had two ſtrings to every note, ſome think it probable the name Polyhymnia was deduced. Athenæus reports from Anacreon, that the Magadis had twenty chords; which is a number ſufficient to make us allow they were doubled; ſo that it had in all ten notes: now anciently they had but three tones or modes, and each extended only to an 8ve, and being a tone aſunder, required preciſely ten chords; therefore Athenæus corrects Poſſidonius for ſaying the twenty chords were all diſtinct notes, and neceſſary for the three modes. But he further confirms this point by a citation from the comic poet Alexandrides, who takes a compariſon from the Magadis, and ſays, I am like the Magadis, about to make you underſtand a thing that is at the ſame time both ſublime and low; which proves

proves that two ſtrings were ſtruck together, and that they were not uniſon. He reports alſo the opinion of the poet Jon, that the Magadis conſiſted of two flutes, which were both ſounded together. From all this 'tis plain, That by magadiſed, Ariſtotle means ſuch a conſonance of ſounds as to be in every note at the ſame diſtance, and conſequently to be without Symphony and parts according to the modern practice. Athenæus reports alſo of Pindar, that he called the muſic ſung by a boy and a man, Magadis; becauſe they ſung together the ſame ſong in two modes. Mr. Perault concludes from this, that the ſtrings of the Magadis were ſometimes 3ds, becauſe Ariſtotle ſays, the 4th and 5th are never magadiſed: but why may not Pindar mean that they were at an 8ve's diſtance; for certainly Ariſtotle uſed that compariſon of a boy and a man to expreſs an 8ve: Mr. Perault thinks it muſt be a 3d, becauſe of the word mode, whereof anciently there were but three; and confirms it by a paſſage out of Horace, Epod. 9. Sonante miſtum tibiis carmen lyra; hac Dorium illis Barbarum: by the Barbarum, ſays he, is to be underſtood, the Lydian, which was a Ditone above the Dorian: but the difficulty is, that the ancients reckoned the Ditone at beſt a concinnous Diſcord; and therefore 'tis not probable they would uſe it in ſo remarkable a manner: but we have enough of this. The author laſt named obſerves, that the ancients probably had a kind of ſimple harmony, in which two or three notes were tuned to the principal chords of the key, and accompanied the ſong. This he thinks probable from the name of an inſtrument Pandora that Athenæus mentions; which is likely the ſame with the Mandora, an inſtrument not very long ago uſed, ſays he, in which there were four ſtrings, whereof one ſerved for the ſong, and was ſtruck by a Plectrum or quill tied to the fore-finger: the other three were tuned ſo as two of them were an 8ve, and the other a middle, dividing the 8ve into a 4th and 5th: they were ſtruck by the thumb, and this regulated by the rythmus or meaſure of the ſong, i. e. Four ſtrokes for every meaſure of common time, and three for triple.

triple. He thinks Horace points out the manner of this inſtrument in Ode 6. Leſbium ſervate pedem, meique pollicis ictum, which he thus tranſlates. Take notice, you who would join your voice to the ſound of my lyre, that the meaſure of my ſong is ſapphic, which the ſtriking of my thumb marks out to you. This inſtrument is parallel to our common bagpipe.

The paſſages of Ariſtotle being thus cleared, Seneca and Caſſiodorus may be eaſily given up. Seneca ſpeaks of vox media, as well as acuta and gravis; but this can ſignify nothing, but that there might be two 8ves, one between the men and women, and the ſhrill tibiæ might be 8ve above the women: but then the latter part of what he ſays, deſtroys their cauſe; for ſingulorum voces latent, can very well be ſaid of ſuch as ſing the ſame melody uniſon or octave, but would by no means be true of ſeveral voices performing a modern Symphony, where every part is conſpicuous, with a perfect harmony in the whole. For Caſſiodorus, what he ſays has no relation to conſonance, An adjuſtment of a grave ſound to an acute, or an acute to a grave making melody: if it be alledged that temperamentum may ſignify a mixture, it muſt be allowed; but then he ought to have ſaid, Temperamentum ſonitus gravis & acuti; for what means ſonitus gravis ad acutum, and again acuti ad gravem? But in the other caſe, this is well enough, for he means, That melody may conſiſt either in a progreſs from acute to grave, or contrarily: and then the word modulamen was never applied any other way than to ſucceſſive ſounds. There is another paſſage which Iſ. Voſſius cites from Ælian the Platonic, where he ſays, Symphony conſiſts of two or more ſounds differing in acuteneſs and gravity, with the ſame cadence and temperament: but this rather adds another proof that what Symphonies they had were only of ſeveral voices ſinging the ſame melody only in a different tone.

After ſuch evident demonſtrations, there needs no more to be ſaid to prove, that Symphonies of different parts are a modern improvement. From their rejecting the 3ds and 6ths out of the number of concords, the ſmall

ſmall extent of their ſyſtem being only two octaves, and having no tone divided but that between Meſe and Parameſe, we might argue that they had no different parts: for tho' ſome ſimple compoſitions of parts might be contrived with theſe principles, yet 'tis hard to think they would lay the foundations of that practice, and carry it no further; and much harder to believe, they would never ſpeak one word of ſuch an art and practice, where they profeſs to explain all the parts of muſic. But for the ſymphonies, which we allow them to have had, you will aſk why theſe writers don't ſpeak of them, and why it ſeems ſo incredible that they ſhould have had the other kind without being ever mentioned, when they don't mention theſe we allow? The reaſon is plain, becauſe the muſician's buſineſs was only to compoſe the melody, and therefore they wanted only rules about that; but there was no rule required to teach how ſeveral voices may join in the ſame ſong, for there is no art in it: experience taught them that this might be done in uniſon or octave; and pray what had the writers more to ſay about it? But the modern ſymphony is a quite different thing, and needs much to be explained both by rules and examples. But 'tis time to make an end of this point: there is only to be added, that if plain reaſon needs any authority to ſupport it, there can be adduced many moderns of character, who make no doubt to ſay, that after all their pains to know the true ſtate of the ancient muſic, they could not find the leaſt ground to believe there was any ſuch thing in theſe days, as muſic in parts. Perrault has been named, and ſhall only add to him Kircher and Doctor Wallis, authors of great capacity and infinite induſtry.

Our next compariſon ſhall be of the melody of the ancients and moderns; and here comes in what's neceſſary to be ſaid on the other parts of muſic, viz. the rythmus and verſe. In order to this compariſon, melody ſhall be diſtinguiſhed into vocal and inſtrumental. By the firſt, is meant muſic ſet to words, eſpecially verſes; and by the other, muſic compoſed only for inſtruments without ſinging. For the vocal you ſee by the definition that poetry makes a neceſſary part

of it: this was not only of ancient practice, but the chief, if not their only practice, as appears from their definitions of muſic already explained. 'Tis not to be expected that there ſhould be any compariſon made of the ancient and modern poetry; 'tis enough to obſerve, That there are admirable performances in both; and if we come ſhort of them, 'tis not for want either of genius or application: but perhaps we ſhall be obliged to own, that the Greek and Latin languages were better contrived for pleaſing the ear. We are next to conſider, that the rythmus of their vocal muſic was only that of the poetry, depending altogether on the verſe, and had no other forms or variety than what the metrical art afforded: under the head of mutations, thoſe who conſider the rythmus make the changes of it no other than from one kind of metrum or verſe to another, as from jambick to choraick: and we may notice too, That in the more general ſenſe, the rythmus includes alſo, their dancings, and all the theatrical action. It is to be imagined therefore, that their vocal muſic conſiſted of verſes, ſet to muſical tones, and ſung by one or more voices in choirs or alternately; ſometimes with and alſo without the accompaniment of inſtruments: to which we may add, from the laſt article, That their ſymphonies conſiſted only of ſeveral voices performing the ſame ſong in different tones as uniſon and octave. For inſtrumental muſic, 'tis not ſo very plain that they uſed any: and if they did, 'tis more than probable the rythmus was only an imitation of the poetical numbers, and conſiſted of no other meaſures than what were taken from the variety and kinds of their verſes; of which they pretended a ſufficient variety for expreſſing any ſubject according to its nature and property: and ſince the chief deſign of their muſic ſeems to have been to move the heart and paſſions, they needed no other rythmus. It cannot be denied, that there are many paſſages which fairly inſinuate their practice upon inſtruments without ſinging; ſo *Athenæus* ſays, The Synaulia was a conteſt of pipes performing alternately without ſinging. And Quintilian hath this expreſſion, If the numbers and airs of muſic have ſuch a virtue, how much more ought eloquent words to have? That

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is to ſay, the other has virtue or power to move us, without reſpect to the words. But if they had any rythmus for inſtrumental performances, which was different from that of their poetical meaſures, how comes it to paſs that thoſe authors who have been ſo full in explaining the ſigns by which their notes of muſic were repreſented, ſpeak not a word of the ſigns of time for inſtruments? Whatever be in this, it muſt be owned that ſinging with words was the moſt ancient practice of muſic, and the practice of their more ſolemn and perfect entertainments, as appears from all the inſtances above adduced, to prove the ancient uſe and eſteem of muſic: and that it was the univerſal and common practice, even with the vulgar, appears by the paſtoral dialogues of the poets, where the conteſt is ordinarily about their ſkill in muſic, and chiefly in ſinging.

Let us next conſider what the preſent practice (among Europeans at leaſt) conſiſts of. We have, firſt, vocal muſic; and this differs from the ancient in theſe reſpects, viz. That the conſtitution of the rythmus is different from that of the verſe, ſo far, that in ſetting muſic to words, the thing principally minded is, to accommodate the long and ſhort notes to the ſyllables in ſuch manner as the words may be well ſeparated, and the accented ſyllable of every word ſo conſpicuous, that what is ſung may be diſtinctly underſtood: the movement and meaſure is alſo ſuited to the different ſubjects, for which the variety of notes, and the conſtitutions or modes of time afford ſufficient means. Then we differ from the ancients in our inſtrumental accompaniments, which compoſe ſymphonies with the voice, ſome in uniſon, others making a diſtinct melody; which produces a raviſhing entertainment they were not bleſt with, or at leaſt without which we ſhould think ours imperfect. Then there is a delightful mixture of pure inſtrumental ſymphonies, performed alternately with the ſong. Laſtly, We have compoſitions fitted altogether for inſtruments: the deſign whereof is not ſo much to move the paſſions, as to entertain the mind and pleaſe the fancy with a variety of harmony and rythmus; the principal effect of which is to raiſe delight and admiration. This is the plain ſtate of the

ancient and modern muſic, in reſpect of practice: but to determine which of them is moſt perfect, will not perhaps be ſo eaſily done to ſatisfy every body. Tho' we believe their's to have been excellent in its kind, and to have had noble effects; this will not pleaſe ſome, unleſs we acknowledge ours to be barbarous, and altogether ineffectual. The effects are indeed the true arguments; but how ſhall we compare theſe, when there remain no examples of ancient compoſition to judge by? ſo that the defenders of the ancient muſic admire a thing they don't know; and in all probability judge not of the modern by their perſonal acquaintance with it, but by their fondneſs for their own notions. Thoſe who ſtudy our muſic, and have well tuned ears, can bear witneſs to its noble effects: yet perhaps it will be replied, That this proceeds from a bad taſte, and ſomething natural, in applauding the beſt thing we know of any kind. But let any body produce a better, and we ſhall heartily applaud it. They bid us bring back the ancient muſicians, and then they will effectually ſhew us the difference; and we bid them learn to underſtand the modern muſic, and believe their own ſenſes: in ſhort, we think we have better reaſon to determine in our own favours, from the effects we actually feel, than any body can have from a thing they have no experience of, and can pretend to know no other way than by report: but we ſhall conſider the pretences of each party a little nearer. It has been already obſerved, that the principal end the ancients propoſed in their muſic, was to move the paſſions; and to this purpoſe poetry was a neceſſary ingredient. We have no diſpute about the power of poetical compoſitions to affect the heart, and move the paſſions, by ſuch a ſtrong and lively repreſentation of their proper objects, as that noble heart is capable of: the poetry of the ancients we own is admirable; and their verſes being ſung with harmonious cadances and modulations, by a clear and ſweet voice, ſupported by the agreeable ſound of ſome inſtrument, in ſuch manner that the hearer underſtood every word that was ſaid, which was all delivered with a proper action, that is, pronunciation and geſtures ſuitable to, or expreſſive of the ſubject,

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as we alſo ſuppoſe the kind of verſe, and the modulation applied to it was; taking their vocal muſic in this view, we make no doubt that it had admirable effects in exciting love, pity, anger, grief, or any thing elſe the poet had a mind to: but then they muſt be allowed to affirm, who pretend to have the experience of it, That the modern muſic, taking it in the ſame ſenſe, has all theſe effects. Whatever truth may be in it, we ſhall paſs what Doctor Wallis alledges, viz. That theſe ancient effects were moſt remarkably produced upon ruſtics, and at a time when muſic was new, or a very rare thing: but it muſt be obſerved with him, That the paſſions are eaſily wrought upon. The deliberate reading of a romance well written will produce tears, joy, or indignation, if one gives his imaginations a looſe; but much more powerfully when attended with the things mentioned: ſo that it can't be thought ſo very myſterious and wonderful an art to excite paſſion, as that it ſhould be quite loſt. Our poets are capable to expreſs any moving ſtory in a very pathetic manner: our muſicians too know how to apply a ſuitable modulation and rythmus: and we have thoſe who can put the whole in execution; ſo that a heart capable of being moved will be forced to own the wonderful power of modern muſic: the Italian and Engliſh theatres afford ſufficient proof of this; ſo that it is to be believed, were we to collect examples of the effects that the acting of modern tragedies and operas have produced, there would be no reaſon to ſay we had loſt the art of exciting paſſion. But 'tis needleſs to inſiſt on a thing which ſo many know by their own experience. If ſome are obſtinate to affirm, That we are ſtill behind the ancients in this art, becauſe they have never felt ſuch effects of it; we will aſk them if they think every temper and mind among the ancients was equally diſpoſed to reliſh, and be moved by the ſame things? If tempers differed then, why may they not now, and yet the art be at leaſt, as powerful as ever? Again, have we not as good reaſon to believe thoſe who affirm they feel this influence, as you who ſay you have never experienced it? And if you put the matter altogether upon the authority of others, pray, is not the teſtimony

teſtimony of the living for the one, as good as that of the dead for the other?

But ſtill there are wonders pretended to have been performed by the ancient muſic, which we can produce nothing like; ſuch as thoſe amazing tranſports of mind, and hurrying of men from one paſſion to another, all on a ſudden, like the moving of a machine, of which we have ſo many examples in hiſtory. For theſe we ſhall anſwer, That what is reckoned incredible in them may juſtly be laid upon the hiſtorians, who frequently aggravate things beyond what's ſtrictly true, or even their credulity in receiving them upon weak grounds; and moſt of theſe ſtories are delivered to us by writers who were not themſelves witneſſes of them, and had them only by tradition and common report. If nothing like this had ever been juſtly objected to the ancient hiſtorians, we might think ourſelves obliged to find another anſwer: but ſince 'tis ſo, we may be allowed to doubt of theſe facts, or ſuſpect at leaſt that they are in a great degree hyperbolical. Conſider but the circumſtances of ſome of them as they are told, and if they are literally true, and can be accounted for no other way but by the power of ſound, it muſt be owned they had an art which is loſt: for example, the quelling of a ſedition. Let us repreſent to ourſelves a furious rabble, envenomed with diſcontent, and enraged with oppreſſion; or let the grounds of their rebellion be as imaginary as you pleaſe, ſtill we muſt conſider them as all in a flame; ſuppoſe next, they are attacked by a ſkilful muſician, who addreſſes them with his pipe or lyre; how likely is it that he ſhould perſuade them by a ſong to return to their obedience, and lay down their arms? Or rather, how probable is it that he may be torn to pieces, as a ſolemn mocker of their juſt reſentment? But that there may be allowed ſome foundation for ſuch a ſtory, we will ſuppoſe a man of great authority for virtue, wiſdom, and the love of mankind, comes to offer his humble and affectionate advice to ſuch a company; we will ſuppoſe too, he delivers it in verſe, and perhaps ſings it to the ſound of his lyre, (which ſeems to have been a common way of delivering public exhortations in more ancient times,

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the muſic being uſed as a means to gain their attention,) it cannot be thought impoſſible that this man may perſuade them to peace, by repreſenting the danger they run, aggravating the miſchief they are like to bring upon themſelves and the ſociety, or alſo correcting the falſe views they may have had of things. But then will any body ſay, all this is the proper effect of muſic, unleſs reaſoning be alſo a part of it? And muſt this be an example of the perfection of the ancient art, and its preference to ours? In the ſame manner may other inſtances alledged be accounted for, ſuch as Pythagoras's diverting a young man from the execution of a wicked deſign, the reconcilement of two inveterate enemies, the curing of Clytemneſtra's vicious inclinations, &c. Horace's explication of the ſtories of Orpheus and Amphion, makes it probable we ought to explain all the reſt the ſame way. For the ſtory of Timotheus and Alexander, as commonly repreſented, it is indeed a very wonderful one, but we muſt here allow ſomething to the boldneſs or credulity of the hiſtorian: That Timotheus, by ſinging to his lyre, with moving geſture and pronunciation, a well compoſed poem of the atchievements of ſome renowned hero, as Achilles, might awaken Alexander's natural paſſion for warlike glory, and make him expreſs his ſatisfaction with the entertainment in a remarkable manner, is in no wiſe incredible: we are to conſider too the fondneſs he had for the Iliad, which would diſpoſe him to be moved with any particular ſtory out of that: but how he ſhould forget himſelf ſo far, as to commit violence on his beſt friend, is not ſo eaſily accounted for, unleſs we ſuppoſe him at that time as much under the power of Bacchus as of the muſes: and that a ſofter theme ſung with equal art, ſhould pleaſe a hero who was not inſenſible of Venus's influences, is no myſtery, eſpecially when his miſtreſs was in company: but there is nothing here above the power of modern poetry and muſic, where it meets with a ſubject the ſame way diſpoſed, to be wrought upon. To make an end of this, the hiſtorians, by ſaying too much, have given us ground to believe very little. What do you think of curing a raging peſtilence by muſic?

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For curing the bites of ſerpents, we cannot ſo much doubt it, ſince that of the Tarantula has been cured in Italy. But then they have no advantage in this inſtance: and we muſt mind too, that this cure is not performed by exquiſite art and ſkill in muſic; it does not require a Correlli or Valentini, but is performed by ſtrains diſcovered by random trials without any rule: and this will ſerve for an anſwer to all that's alledged of the cure of diſeaſes by the ancient muſic.

'Tis time to bring this compariſon to an end; and after what's explained, it muſt be owned, that the ſtate of muſic is much more perfect now than it was among the ancient Greeks and Romans. The art of muſic, and the true ſcience of harmony in ſounds is greatly improved. Their muſic has been allowed (including poetry and the theatrical action) to have been very moving; but at the ſame time it muſt be ſaid, their melody has been a very ſimple thing, as their ſyſtem or ſcale plainly ſhews.

And the confining all their rythmus to the poetical numbers, is another proof of it, and ſhews that there has been little air in their muſic; which by this appears to have been only of the recitative kind, that is, only a more muſical ſpeaking, or modulated elocution; the character of which is to come near nature, and be only an improvement of the natural accents of words by more pathetic or emphatical tones; the ſubject whereof may be either verſe or proſe. And as to their inſtruments of muſic, for any thing that appears certain and plain to us, they have been very ſimple. Indeed the public laws in Greece gave check to the improvement of the art of harmony, becauſe they forbade all innovations in the primitive ſimple muſic; of which there are abundance of teſtimonies. Plato ſays, in his Treatiſe of the Laws, viz. That they entertained not in the city the makers of ſuch inſtruments as have many ſtrings, as the Trigonus and Pectis; but the Lyra and Cithara they uſed, and allowed alſo ſome ſimple Fiſtulæ in the country. But 'tis certain, that primitive ſimplicity was altered; ſo that from a very few ſtrings, they uſed a great number: but there is much uncertainty about the uſe of them, as whether it

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was for mixing their modes, and the genera, or for ſtriking two chords together as in the magadis. Since inſtruments have been mentioned, two things muſt be obſerved, firſt, That they pretend to have had tibiæ of different kinds, whoſe ſpecific ſounds were excellently choſen for expreſſing different ſubjects. Then, there is a deſcription of the Organum hydraulicum in Tertullian, which ſome adduce to prove how perfect their inſtruments were.—Specta portentoſam Archimedis munificentiam; organum hydraulicum dico, tot membra, tot partes, tot compagines, tot itinera vocum, tot compendia fonorum, tot commercia modorum, tot acies tibiarum, & una moles erunt omnia. But it will not be pretended to have been more perfect than our modern organs: And what have they to compare of the ſtringed kind, with our harpſichords; and all the inſtruments that are ſtruck with a bow?

After all, if our melody or ſongs are only equal to the ancients, it is to be hoped, the art of muſic is not loſt as ſome pretend. But then, what an improvement in the knowledge of pure harmony has been made, ſince the introduction of the modern ſymphonies? Here it is, that the mind is raviſhed with the agreement of things ſeemingly contrary to one another. We have here a kind of imitation of the works of nature, where different things are wonderfully joined in one harmonious unity: And as ſome things appear at firſt view the fartheſt removed from ſymmetry and order, which from the courſe of things we learn to be abſolutely neceſſary for the perfection and beauty of the whole; ſo diſcords being artfully mixed with concords, make a more perfect compoſition, which ſurpriſes us with delight. If the mind is naturally pleaſed with perceiving of order and proportion, with comparing ſeveral things together, and diſcerning in the midſt of a ſeeming confuſion, the moſt perfect and exact diſpoſition and united agreement; then the modern concerts muſt undoubtedly be allowed to be entertainments worthy of our natures: And with the harmony of the whole we muſt conſider the ſurpriſing variety of air, which the modern conſtitutions and modes of time or rythmus afford; by which, in our inſtrumental performances, the ſenſe and imagination are ſo

mightily charmed. Now, this is an application of muſic to a quite different purpoſe from that of moving paſſion: But is it reaſonable upon that account, to call it idle and inſignificant, as ſome do. It was certainly a noble uſe of muſic to make it ſubſervient to morality and virtue; and if we apply it leſs that way, 'tis becauſe we had leſs need of ſuch allurements to our duty: but whatever be the reaſon of this, 'tis enough to the preſent argument, that our muſic is at leaſt not inferior to the ancient in the pathetic kind: and if it be not a low and unworthy thing for us to be pleaſed with proportion and harmony, in which there is properly an intellectual beauty, then it muſt be confeſſed, that the modern muſic is more perfect than the ancient. But why muſt the moving of particular paſſions be the only uſe of muſic? If we look upon a noble building, or a curious painting, we are allowed to admire the deſign, and view all its proportions and relation of parts with pleaſure to our underſtandings, without any reſpect to the paſſions. We muſt obſerve again, that there is ſcarce any piece of melody that has not ſome general influence upon the heart; and by being more ſprightly or heavy in its movements, will have different effects; tho' it is not deſigned to excite any particular paſſion, and can only be ſaid in general to give pleaſure, and recreate the mind. But why ſhould we diſpute about a thing which only ſtrangers to muſic can ſpeak ill of? And for the harmony of different parts, the defenders of the ancient muſic own it to be a valuable art, by their contending for its being ancient: let me therefore again affirm, that the moderns have wonderfully improved the art of muſic. It muſt be acknowledged indeed, that to judge well, and have a true reliſh of our more elaborate and complex muſic, or to be ſenſible of its beauty, and taken with it, requires a peculiar genius, and much experience, without which it will ſeem only a confuſed noiſe; but I hope this is no fault in the thing. If one altogether ignorant of painting looks upon the moſt curious piece, wherein he finds nothing extraordinary moving to him, becauſe the excellency of it may lie in the deſign and admirable proportion and ſituation of the parts which

he

he takes no notice of: muſt we therefore ſay, it has nothing valuable in it, and capable to give pleaſure to a better judge? What, in muſic or painting, would ſeem intricate and confuſed, and ſo give no ſatisfaction to the unſkilled, will raviſh with admiration and delight, one who is able to unravel all the parts, obſerve their relations and the united concord of the whole. But now, if this be ſuch a real and valuable improvement in muſic, you will aſk, How it can be thought the ancients could be ignorant of it, and ſatisfy themſelves with ſuch a ſimple muſic, when we conſider their great perfection in the ſiſter arts of poetry and painting, and all other ſciences? How it comes that the ancients left us any thing to invent or improve? And how comes it that different ages and nations have genius and fondneſs for different things? The ancients ſtudied only how to move the heart, to which a great many things neceſſarily concurred, as words, tune, and action; and by theſe we can ſtill produce the ſame effects; but we have alſo a new art, whoſe end is rather to entertain the underſtanding, than to move particular paſſions. What connection there is between their improving other ſciences and this, is not ſo plain as to make any certain concluſion from it. And as to their painting, there have been very good reaſons alledged to prove, That they followed the ſame taſte there as in the muſic, i. e. the ſimple obvious beauties, of which every body might judge and be ſenſible. Their end was to pleaſe and move the people, which is better done by the ſenſes and the heart than by the underſtanding; and when they found ſufficient means to accompliſh this, why ſhould we wonder that they proceeded no further, eſpecially when to have gone much beyond, would likely have loſt their deſign. But, ſay you, this looks as if they had been ſenſible there were improvements of another kind to be made: ſuppoſe it was ſo, yet they might ſtop when their principal end was obtained. And Plutarch ſays as much, for he tells us it was not ignorance that made the ancient muſic ſo ſimple, but it was ſo out of politic: yet he complains, that in his own time, the very memory of the ancient modes that had been ſo uſeful in the

education of youth, and moving the paſſions, was loſt thro' the innovations and luxurious variety introduced by later muſicians; and now, when a full liberty ſeems to have been taken, may we not wonder that ſo little improvement was made, or at leaſt ſo little of it explained and recorded to us by thoſe who wrote of muſic, after ſuch innovations were ſo far advanced.

This diſpute (which is perhaps too tedious already) ſhall be ended with a ſhort conſideration of what the boldeſt accuſer of the modern muſic, Iſaac Voſſius, ſays againſt it, in his book de poematum cantu & viribus rythmi. He obſerves, what a wonderful power motion has upon the mind, by communication with the body; how we are pleaſed with rythmical or regular motion; then he obſerves, that the ancient Greeks and Latins perceiving this, took an infinite pains to cultivate their language, and make it as harmonious, eſpecially in what related to the rythmus, or number and combination of long and ſhort ſyllables, as poſſible; to this end particularly were the pedes metrici invented, which are the foundations of their verſification; and this he owns was the only rythmus of their muſic, and ſo powerful, that the whole effect of muſic was aſcribed to it. And to prove the power attributed to the rythmus, he cites ſeveral paſſages. That it gives life to muſic, eſpecially the pathetic, will not be denied; and we ſee the power of it even in plain proſe and oratory: but to make it the whole, is perhaps attributing more than is due: it is rather to be thought the words and ſenſe of what's ſung, the principal ingredient; and the other a noble ſervant to them, for raiſing and keeping up the attention, becauſe of the natural pleaſure annexed to theſe ſenſations. 'Tis very true, that there is a connection between certain paſſions, which we call motions of the mind, and certain motions in our bodies; and when by any external motion theſe can be imitated and excited, no doubt we ſhall be much moved; and the mind, by that influence, becomes either gay, ſoft, briſk or drowſy: but how any particular paſſion can be excited without ſuch a lively repreſentation of its proper object, as only words afford, is not very intelligible; at leaſt this appears to me the moſt juſt and effectual way.

But

But let us hear what notion others had of this matter, Quintilian ſays, If the numbers of muſic have ſuch influence, how much more ought eloquent words to have? And in all the ancient muſic the greateſt care was taken, that not a ſyllable of the words ſhould be loſt, for ſpoiling the ſenſe, which Voſſius himſelf obſerves and owns. Pancirollus, who thinks the art loſt, aſcribes the chief virtue of it to the words.—Siquidem una cum melodia integra percipiebantur verba: and the very reaſon he gives, that the modern muſic is leſs perfect, is, that we hear ſounds without words, by which, ſays he, the ear is a little pleaſed, without any entertainment to the underſtanding: but all this has been conſidered already. Voſſius alledges the mimic art, to prove, that the power of motion was equal to the moſt eloquent words; but we ſhall be as much ſtraitned to believe this, as the reſt of their wonders. Let them believe it who will, that a pantomime had art to make himſelf eaſily underſtood without words, by people of all languages: and that Roſcius, the comedian, could expreſs any ſentence by his geſtures, as ſignificantly and variouſly, as Cicero with all his oratory. Whatever this art was, 'tis loſt, and perhaps it was ſomething very ſurpriſing; but 'tis hard to believe theſe ſtories literally. However to the thing in hand, we are concerned only to conſider the muſical or poetical rythmus.

Voſſius ſays, that rythmus which does not contain and expreſs the very forms and figures of things, can have no effect; and that the ancient poetical numbers alone are juſtly contrived for this end. And therefore the modern languages and verſe are altogether unfit for muſic; and we ſhall never have, ſays he, any right vocal muſic, till our poets learn to make verſes that are capable to be ſung, that is, as he explains it, till we new model our languages, reſtore the ancient metrical feet, and baniſh our barbarous rhimes. Our verſes, ſays he, run all as it were on one foot, without diſtinction of members and parts, in which the beauty of proportion is to be found; therefore he reckons, that we have no rythmus at all in our poetry; and affirms, that we mind nothing but to have ſuch a certain

certain number of ſyllables in a verſe, of whatever nature, and in whatever order. Now, what a raſh and unjuſt criticiſm is this! if it was ſo in his mother tongue, the Dutch, I know not; but it is otherwiſe in Engliſh. 'Tis true, we don't follow the metrical compoſition of the ancients; yet we have ſuch a mixture of ſtrong and ſoft, long and ſhort ſyllables, as makes our verſes flow, rapid, ſmooth, or rumbling, agreeable to the ſubject. Take any good Engliſh verſe, and by a very ſmall change in the tranſpoſition of a word or ſyllable, any body who has an ear will find, that we make a very great matter of the nature and order of the ſyllables. But why muſt the ancient be the only proper metre for poetry and muſic? He ſays, their odes were ſung, as to the rythmus, in the ſame manner as we ſcan them, every pes being a diſtinct bar or meaſure, ſeparate by a diſtinct pauſe; but in the bare reading, that diſtinction was not accurately obſerved, the verſe being read in a more continuous manner. Again he notices, that after the change of the ancient pronunciation, and the corruption of their language, the muſic decayed till it became a poor and inſignificant art. Their odes had a regular return of the ſame kind of verſe; and the ſame quantity of ſyllables in the ſame place of every ſimilar verſe: but there's nothing, ſays he, but confuſion of quantities in the modern odes; ſo that to follow the natural quantity of our ſyllables, every ſtanza will be a different ſong, otherwiſe than in the ancient verſes: (he ſhould have minded, that every kind of ode was not of this nature; and how heroic verſes were ſung, if this was neceſſary, is hard to be diſcovered, becauſe in them the dactylus and ſpondeus are ſometimes in one place of the verſe, and ſometimes in another.) But inſtead of this, he ſays, the moderns have no regard to the natural quantity of the ſyllables, and have introduced an unnatural and barbarous variety of long and ſhort notes, which they apply without any regard to the ſubject and ſenſe of the verſe, or the natural pronunciation: ſo that nothing can be underſtood that's ſung, unleſs one knows it before; and therefore, no wonder, ſays he, that our vocal muſic has no effects. Now

here

here is indeed a heavy charge, but experience gives me authority to affirm it to be abſolutely falſe. We have vocal muſic as pathetic as ever the ancient was. If any ſinger don't pronounce intelligibly, that is not the fault of the muſic, which is always ſo contrived, as the ſenſe of the words may be diſtinctly perceived. But this is impoſſible, ſays he, if we don't follow the natural pronunciation and quantity; which is precariouſly ſaid; for was the ſinging of the ancient odes by ſeparate and diſtinct meaſures of metrical feet, in which there muſt frequently be a ſtop in the very middle of a word, was this the natural pronunciation, and the way to make what was ſung beſt underſtood? He tells us, they read their poems otherwiſe. And if practiſe would make that diſtinct enough to them, will it not be as ſufficient in the other caſe. Again, to argue from what's ſtrictly natural, will perhaps be no advantage to their cauſe; for don't we know, that the ancients admitted the moſt unnatural poſitions of words, for the ſake of a numerous ſtile, even in plain proſe; and took ſtill greater liberties in poetry, to depart from the natural order in which ideas lie in our mind; far otherwiſe than it is in the modern languages, which will therefore be more eaſily and readily underſtood in ſinging, if pronounced diſtinctly, than the ancient verſe could be, wherein the conſtruction of the words was more difficult to find, becauſe of the tranſpoſitions. Again the difference of long and ſhort ſyllables in common ſpeaking, is not accurately obſerved; not even in the ancient languages; for example, in common ſpeaking, who can diſtinguiſh the long and ſhort ſyllables in theſe words, ſatis, nivis, miſit. The ſenſe of a word generally depends upon the right pronunciation of one ſyllable, or two at moſt in very long words; and if theſe are made conſpicuous, and the words well ſeparated by a right application of the long and ſhort notes, as we certainly know to be done, then we follow the natural pronunciation more this way than the other. If 'tis replied, that ſince we pretend to a poetical rythmus, ſuitable to different ſubjects, why don't we follow it in our muſic? Tho' that rythmus is more diſtinguiſhed in the recitation of poems, yet

yet our muſical rythmus is accommodated alſo to it; but with ſuch liberty as is neceſſary to make good melody; and even to produce ſtronger effects than a ſimple reciting can do; and I would aſk, for what other reaſon the ancients ſung their poems in a manner different from the bare reading of them? Still he tells us, that we want the true rythmus, which can only make pathetic muſic; and if there is any thing moving in our ſongs, he ſays, 'tis only owing to the words; ſo that proſe may be ſung as well as verſe: that the words ought naturally to have the greateſt influence, has been already conſidered; and there is no reaſon why the ancient poetical rythmus ſhould have the only claim to the pathetic; as if they had exhauſted all the combinations of long and ſhort ſounds, that can be moving or agreeable: but indeed the queſtion is about matter of fact, by this defence of the modern muſic, it is not all alike good, or that there can be no juſt objection laid againſt any of our compoſitions, eſpecially in the ſetting of muſic to words; there is only to be ſaid, that we have admirable compoſitions, and that the art of muſic, taken in all that it is capable of, is more perfect than it was among the old Greeks and Romans, at leaſt for what can poſſibly be made appear.

FINIS.

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